DOCUMENT RESUME

ED 046 295 FL 002 085

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TITLE	Let's Be Amigos: Title VII Bilingual Project. Evaluation of the First Year, 1969-1970.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
REPORT NO	R-7139
PUB DATE	Sep 70
GRANT	OEG-0-9-480089-3503-280
NOTE	134p.
AVAILABLE FROM	Director, Division of Instructional Research & Development, School District of Philadelphia, Philadelphia, Pa.
EDRS PRICE	EDRS Price MF-$0.65 HC Not Available from EDRS.
DESCRIPTORS	Academic Performance, Biculturalism, *Bilingual Education, Bilingual Schools, Bilingual Students, Educational Research, Elementary Schools, English, Evaluation Criteria, Language Instruction, Language Programs, *Modern Languages, *Program Descriptions, Program Effectiveness, *Program Evaluation, Secondary Schools, *Spanish, Spanish Speaking

ABSTRACT

This study assesses the implementation of the "Let's Be Amigos" program for Spanish- and English-speaking students during its first year. The program, operating in Philadelphia at the elementary and secondary school levels, is described in terms of instructional objectives, evaluation criteria and procedures, student performance, teacher perceptions of student behavior, reading and writing skills of first-grade students, and the continuing-education-in-Spanish program. Commentary on a summer institute (1969) for training teachers in bilingual education programs concludes the report. Statistical data, linguistic examples, and graphs are used extensively. (RL)

ED046295

OE/ BESE
Title VII

TITLE VII BILINGUAL PROJECT
LET'S BE AMIGOS
EVALUATION OF THE FIRST YEAR, 1969-1970

REPORT NO. 7139

Robert M. Offenberg
Research Associate

Sept. 1970

FL 002 085

This program is supported in part by a grant from the United States Office of Education, Number OEG-0-9-480089-3503(280). Program supervisors Ruth Pedorenko, Felicita Rodriguez, and Ramona Rodrigues assisted with planning and implementing the data collection.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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TITLE VII BILINGUAL PROJECT

LET'S BE AMIGOS

EVALUATION OF THE FIRST YEAR, 1969-1970

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September 1970

INTRODUCTION AND SUMMARY OF THE LET'S BE AMIGOS FIRST-YEAR EVALUATION

The Philadelphia Bilingual Project funded under Title VII includes two distinct programs, aimed at meeting the needs of Spanish-speaking students and fostering English-Spanish bilingualism:

- The Potter-Thomas Model School program, which operates at the elementary school level, and
- The Arriba program of continuing education in Spanish, which operates at the upper levels of elementary schools and in secondary schools.

In 1969-1970, the Let's Be Amigos project was begun at the Potter-Thomas Elementary School, where the Model School program was instituted at the prekindergarten, kindergarten, and first-grade levels; and at the Ludlow and Waring Elementary Schools, Penn Treaty and Stoddart-Fleisher Junior High Schools, and Edison and Kensington High Schools, where the Arriba program was initiated.

The major aims of Model School were to meet the needs of all students in a community where both the English and Spanish languages are in common use. Its major goals were the following:

- To educate both native English-speaking and native Spanish-speaking students in the use of both languages.
- To introduce subject matter in the mother tongue (in curricular areas other than language), with selected follow-up in the second language.
- To create a bicultural environment incorporating aspects of the Puerto Rican and mainland traditions.

The Arriba program provided opportunities for students whose mother tongue is Spanish to study one or more subjects in that language while studying English as a second language. This program provided at least a Spanish language course, a mathematics course, a science course, a social studies course, and English as a second language, in each school. The programs were designed for students in the fifth grade and over.

Both programs are based on the assumptions that students can grow cognitively and emotionally when they are approached first in their mother tongue and then are allowed to develop it while learning to use a second language. In addition, the Model School program assumes that knowledge of a second language spoken by a minority group is a valuable asset, even for students who speak English, the dominant language of the community in which they live.

Objectives

1. In the Model School program, fourteen grade-level-specific objectives were developed for analysis during the first year of program operation. Each was broken into "micro-objectives" which were individual behavioral acts.

2. In the Arriba program, the major first-year objectives were to improve grades, classroom deportment, attendance, and punctuality.

3. Management objectives were assessed using data focusing on the effectiveness of the teachers', and principals'and students' perceptions of the programs.

Procedures

Program Description

To accomplish the aims of the Let's Be Amigos program, double-size classes were formed. They were conducted by teams of English- and Spanish-speaking teachers. The typical school day consisted primarily of instruction in the first language, with a lesser amount of instruction in the second language and some activities in which students of both ethnic groups participated.

Materials developed especially for the program were used in the main, but with existing texts employed where appropriate ones were found.

To accomplish the aims of the Arriba program, course work was offered using the Spanish language in four academic disciplines: Spanish as a first language (SFL), science, mathematics, and social studies. All courses except SFL were based, as closely as possible, on the regular school curriculum. SFL was developed jointly by the teacher and the program supervisors under the guidance of the program director. At the elementary and junior high school levels all students in these programs studied the four courses described, as well as English as a second language, (ESL) which was provided through Title 1 funding at most sites. At the senior high schools, students selected courses from among those offered under the Arriba program, but were also free to take others, from the regular school program.

Evaluation

In the Let's Be Amigos Model School program a widely varied techniques were used; specially devised tests, logs kept by teachers, teacher-perception instruments and monitoring all played important parts in both process and product evaluations. Some aspects were experimental-control group studies; others were case studies.

In the Arriba continuing-education-in-Spanish program, current performance of students was compared with that of their own performance the previous year. In addition, students and teachers responded to questionnaires, and classes were monitored.

The staff development aspects of the program were examined through follow-up of the teachers' careers in the schools as well as through assessment by principals of their performance in the classroom.

Findings

As with any new and complex program, attainment varied from objective to objective, but on the whole, it was good for a new program.

Model School

Oral Communication Skills in the First Language. Teachers' logs indicated attainment beyond the minimum expected level in all grades for first-language communication skills. Speaking tests indicated that both Anglo and Latino students were equal or superior to their age mates at the control site (Moffet School).

Oral Communication Skills in the Second Language. Teacher logs indicated that Latinos and prekindergarten Anglos attained specified second-language skills, but Anglo kindegartners and first graders fell short of expected levels. Speaking tests showed that program participants were at least equal and frequently superior to control students on skills measured.

Science and Math Skills. Teachers' logs show that skill acquisition was variable and less than anticipated among kindergarten Latinos and all first-grade students. This was due, in part, to some experimentation in the use of the second language as a medium of instruction. Some tentative data suggest that students in the Latino group may have learned to use science and math concepts better in their second language than in their first.

Prekindergartners' Readiness for an Enriched Kindergarten. A posttest measuring a variety of readiness skills suggested that students were performing on a satisfactory level, and that a substantial number exhibited skill levels warranting an enriched kindergarten program.

Kindergartners' Readiness for the First Grade. Students scored well on the Philadelphia Readiness Test at year end. Latinos tested in English equaled the 1969 all-city mean. Anglos tested in English exceeded both the 1969 all-city mean and the 1969 mean for the Potter-Thomas School. Latinos tested in Spanish exceeded these two criterion points, and scored higher than any school did in 1969.

Reading in the First Grade. By year end, both Anglo and Latino students were reading at satisfactory difficulty levels (primer), but in both groups the number of errors was higher than specified in the criterion.

Writing in the First Grade. Students exceeded the criteria specified in the first-grade writing objective ahead of schedule.

Arriba

Student Performance. Participation in the program improved students' grades and behavior ratings. There was no improvement in dropout rates, absenteeism or lateness.

Student Interest. Nearly all students wish to continue in Spanish-language classes. At the secondary level most prefer a mixture of English-language and Spanish-language classes. In the elementary level, preference is for a program in which Spanish is the medium of communication for all courses.

Staff Development. Results for this program are consistently favorable. All Spanish-speaking teachers trained under program funds performed satisfactorily in the summer program and earned emergency certificates. All but one have completed teaching the entire school year and are making satisfactory progress toward degrees and permanent certification. Principals have provided a highly favorable evaluation of the teachers' performances.

Enabling Objectives and Management

On the whole, the Title VII programs appear to have been managed adequately, but documentation, especially in the Arriba program, has been sketchy. Problems which are expected to demand attention in the second year of the program include the following:

- The need to develop reading materials in the Spanish language for the bilingual model school.
- The need to differentiate second-language objectives to fit the heterogeneous competencies of the two groups in the model school.
- The need to examine the causes of high student turnover in the Arriba program and to develop a strategy to reduce it.

In addition, the evaluation resources for the first half-year were inadequate to the task (one half-time person). This has resulted in the need to engage supervisory personnel in some data collection, and to compromise original design plans to some extent, hopefully without losing too much information. This situation has been remedied.

Conclusion

For a very large, complex project, this has been a good first year. It is clear that a substantial number of the performance objectives were attained. Staff development has been very successful.

It is hoped that the several specific studies which follow in this report may draw attention to areas needing improvement in a manner that will be useful to the program staff.

TABLE OF CONTENTS

		Page
Introduction and Summary of the Let's Be Amigos First-Year Evaluation.		ii
Study 1.	General Process Evaluation of the Model School Program. . .	1
Study 2.	Log of Student Performance in the Model School Program. . .	6
Study 2A.	Oral Communication in the First Language and Second Language in the Model School Bilingual Program.	28
Study 3.	Teacher Perceptions of Student Behavior in the Model School Program.	52
Study 4.	Prekindergartners' Readiness for an All-Day Kindergarten Program	60
Study 5.	Kindergarten Students' Readiness for First Grade.	66
Study 6.	Final Report on Reading Skills in the Mother Tongue in the First-Grade Model School Program.	70
Study 7.	Writing in the Mother Tongue in the First-Grade Model School Program.	83
Study 8.	Process Evaluation, Arriba Continuing-Education-in-Spanish Program	100
Study 9.	Evaluation of Arriba, Program of Continuing Education in Spanish	108
Study 10.	Principals' Evaluation of the Arriba Program and the Model School Program.	115
Study 11.	Summer Institute for Training Teachers, 1969.	122

STUDY 1. GENERAL PROCESS EVALUATION OF THE MODEL SCHOOL PROGRAM

Introduction

Rationale

This study assesses the implementation of most of the Model School program's supportive procedures and enabling objectives which were delineated in the proposal.

Some clarification of the difference between these two classes of program specification is warranted. An "enabling objective" is conceived as having a direct relationship to a performance objective; it describes a set of activities to result in specific pupil behaviors. A "supportive procedure" is conceived as containing elements important for building a bilingual-bicultural atmosphere at the model school, in which the program can operate. For this class, it is not appropriate to specify performance objectives which are direct outcomes of the staff activities, because exposure to the activity or participation in the activity is an end in itself.

Two measures which were specified as parts of enabling objectives (Logs and Devereux scales) are important enough to warrant separate studies, which are treated as studies 2 and 3 in this report. The remaining aspects of the enabling objectives and supportive procedures are presented here.

Enabling Objectives and Supportive Procedures

There is sufficient similarity between groups of the program's enabling objectives for discussion of them in groups to be appropriate. Decimal identification numbers refer to the amended (1970) proposal for the Model School program.

1. Enabling Objectives 1.1-6a (Curriculum Implementation Pre-Kindergarten), 2.1-6a (Curriculum Implementation Kindergarten), and 3.1-6a (Curriculum Implementation First Grade) all specified that program supervisors would review lesson plans and logs, and would monitor classes in order to assure that the program specified in the program guide for each level was taking place in the classroom.

2. Enabling Objectives 1.1-6b (First and Second Language Distribution in the Pre-Kindergarten), 2.1-6b (First and Second Language Distribution in the Kindergarten), and 3.1-6b (First and Second Language Distribution for the First Grade) all specified that the amount of classroom time devoted to instruction in the second language would rise from 10% in September and October to 40-50% by the end of the school year.

3. Enabling Objective 3.7 (First Grade Reading and Writing Programs) stated that, in addition to reading readiness and writing activities specified in the program guide, the first-grade students would begin to use the Bank Street pre-primer and primer if they were English-speaking and the Laidlaw Por el Mundo del Cuento y la Aventura pre-primer and primer if they were Spanish-speaking. These readers were to serve as the source of material for writing as well as for reading.

4. Supportive Procedure 4.1 (Assembly Programs) stated that all model

school pupils would participate in at least one assembly program that reflected Anglo cultural heritage and one similar assembly program that reflected Latino cultural heritage.

5. Supportive Procedure 4.2 (Music Contents) stated that all students would practice singing at least two English songs and two Spanish songs.

6. Supportive Procedure 4.3 (Games) stated that two English and two Spanish games would be taught to all students during a recreation period.

7. Supportive Procedure 4.6 (Puerto Rican Culture and Community Resources Program) stated that bimonthly staff development programs would be held for all teachers in the model program, in order to acquaint them with selected topics in teaching methods which would be consonant with the Anglo and Puerto Rican cultures and which would enable them to capitalize on community resources.

Procedures

Program Description

The attainment of the three clusters of enabling objectives listed above as items one through three was primarily a responsibility of the two program supervisors at Potter-Thomas School who monitored classes and held weekly conferences with teachers for discussion of lesson plans, monitoring, and logs.

The monitoring was on a weekly basis during the earlier parts of the year. During later parts of the year (after January) monitoring and follow up meetings became less frequent as program supervisors became involved in preparation of special teacher aids and materials. Two different monitoring forms were used during the year. The first version contained more open-end items; the second, based on experiences obtained in using the earlier version, was more of a checklist. Highlights of the monitoring process are presented in the "Results" section of this report.

The supportive procedures listed as items four through six were presented to the faculty as rough goals, with much freedom of choice in the manner in which they were to be carried out. The "Results" section of this report shows, in part, how they were put into effect.

The last supportive procedure (item seven, Puerto Rican culture and community resources program) contained a specific set of programs for the first half of the year, including guest speakiers from a variety of community organizations (detailed in the revised "Let's Be Amigos Proposal", page 118). It was originally planned to develop a similar speaker program for the second half of the school year; however, after a review of the teachers' needs, a different type of program was substituted.

Evaluation

The data for the process-objective evaluations came primarily from the monitoring records but were supplemented by the evaluator's discussion with the program supervisors. Data for the evaluation of the supportive procedures came from notes made by the program supervisors, which have been supplemented by the evaluator's additional discussion with them.

Results

Attainment of Enabling Objectives and Supportive Procedures

1. Enabling Objectives 1.1-6a, 2.1-6a and 3.1-6a specified that the classes would be monitored weekly by the program supervisors.

Thirty-four monitoring observations were made in the period from October through December (a period of about 10 weeks of school), for an average of 3.4 observations per week. Thirty-five observations were made during the period from January through May, (a period of about 20 weeks of school), for an average of 1.8 observations per week, with the majority of these observations occurring during the months of February and March.

The Model School program used the skills of 10 teachers. Three pairs worked in the same large room and were usually observed together in one sitting. Others worked in divided rooms where usually only one could be observed at a time. Therefore, there should have been about seven observations per week if the criterion set down in the enabling objectives were to be met. Program supervisors reported that this lower-than-anticipated rate of observation was caused by the program supervisors' assuming more curriculum-development and materials-selection activities than were anticipated, and their assuming a greater role in the preparation and administration of instruments used in evaluating the program. According to program supervisors, virtually every monitoring observation was followed up with at least brief discussion of their assessment of the teachers' activities, usually incorporating an examination of the lesson plan; however, records of these activities were not kept consistently. In the 69 observations made, activities which were directly related to specific program objectives and lesson plans were reported as observed in all but two. In one of these exceptions, the monitor noted that the teacher did not seem sure of her goals for the lesson; in the other, the monitor failed to record what objective, if any, was observed (i.e., the monitoring form was not completed).

In the course of this monitoring, observers indicated a wide variety of topics to be taken up in review with the teacher. A suggestion of the trend of the comments made can be obtained from this sample:

- "Teacher talked too much, should be more class participation." (teacher behavior)
- "Teacher should start providing flash cards with phrases using the (reading) vocabulary." (instructional aids)
- "There were a few discipline problems which may have been caused by boredom since children already knew what was being taught." (long-range planning)

Informal discussion with the supervisors indicated that early in the school year the most serious problems seemed to occur in the area of second language teaching. To this end, at midyear, the supervisors prepared and distributed a guide for teaching the second language, which included suggested activities and techniques. The supervisors felt that the use of this guide improved the teaching of the second language, and have begun preparing an improved version for use in the 1970-1971 school year.

2. Enabling Objectives 1.1-6b, 2.1-6b, 3.1-6b stated that class time using the second language would rise from an average of about 10 %of the school day in the beginning months of the program to about 40-50 %

The supervisors reported that the 40-50 %second-language activity level was not achievable, because the second language skills specified in the program were not sufficient to encompass so great a proportion of other program content. They reported that by the end of the school year, the time using the second language rose from about 10 %to about 20 %.

According to program supervisors' reports and information noted on the logs of some teachers, the curricular area where introduction of the second language was easiest was Number Concepts, because of the relatively small vocabulary required. Even this relatively easy introduction included skills beyond those specified for second language study in the program guides.

3. Enabling Objective 3.7 (First Grade Reading and Writing Programs). This objective was not implemented as smoothly as possible because of delayed receipt of reading materials for the first-grade Latino students. While the English language readers (Bank Street series) were on hand at the school when the formal program began on October 1, the Spanish language readers were not delivered until the beginning of November. This resulted in a delay of about one month in the latter groups study of a reading text, which may partially explain the Anglo edge in reading skills, noted in the interim report on reading (February). However, the time was used to teach reading by other techniques, such as experience charts, which should have minimized the differences observed.

According to program supervisors, the manuscript writing was introduced to all first-grade classes on schedule, in February 1970, and proceeded smoothly, except that one teacher introduced writing in the single-space format (upper case letters filled one standard 3/8" line), whereas all other teachers introduced writing in the double-space format (in which upper case letters fill two 3/8" lines). The latter format is the one preferred by the project supervisors and director.

4. Supportive Procedure 4.1 (Assembly Programs). This procedure was carried out appropriately with two programs giving equal emphasis to the English and Spanish languages.

At Christmas a program was held in which students entertained each other with the singing of English and Spanish seasonal songs. Parents of Latino children also brought typical seasonal foods for the children to sample. According to the supervisors' estimates, about 60 parents attended to view and participate in the festivity.

A program in honor of Mother's Day was held May 8, 1970. As part of this program, the children in each class of the model school sang songs and recited poems, in both English and Spanish. The program supervisors estimated that about 200 mothers of pupils attended this program. A guest book was signed by 126 persons.

5. Supportive Procedure 4.2 (Music Contents). According to program supervisors, the goal of this procedure was exceeded as all students practiced singing at least three songs in each language-- Ocari, Ocara, A la Limon, and Clavelito in Spanish; I'm a Little Puppet, B-I-N-G-O, and Three Little Kittens in English.

In addition, the supervisors reported that all teachers taught other songs to their classes.

Students' skill in singing their songs must have been quite high, as most were performed at the Mother's Day Program.

6. Supportive Procedure 4.3 (Games). Two games in English and two games in Spanish were introduced to all classes by the program supervisors, who taught the children to play them during recreation periods. According to their report, during the latter half of the school year all classes played Simon Says in English and in Spanish, Snowman in English, and Lobo in Spanish.

7. Supportive Procedure 4.6 (Puerto Rican Culture and Community Resourses Program. The six programs programs for staff development were held as indicated in the schedule on page 118 of the Revised Proposal of the Model School Program. Attendance records were available for four out of six programs. Two showed perfect attendance, and two showed one teacher absent. According to program supervisors, attendance at the other meetings was similar.

Following the end of this formal program, a series of short grade-level meetings of teaching staff and supervisors was instituted in place of lectures. According to the participants, kindergarten and pre-kindergarten teachers met with supervisors once per week, and first grade teachers met with them two or three times per week. These meetings were described as focusing on planning lessons using curriculum materials and discussing instructional strategies.

Conclusions

While documentation has not been consistent, the records available and the verbal report of the program supervisors suggest that this program has been well managed. The goals set forth in all of the supportive procedures seem to have been attained or exceeded. The evidence on attainment of the enabling objectives suggests that the Model School program has been implemented in the classroom in a manner as consistent with the proposal as would be possible in a first year of program operation, the principal discrepancies being (a) monotoring less frequent than was anticipated, (b) the failure to obtain some reading texts on time, and (c) the failure to reach a level of 40-50 of the school day devoted to second-language instruction. The first two of these discrepancies seem to be one-time problems which should not recur. The third may point to a misjudgment in formulating project goals--using the second language for about half the school day may not be a realistic goal for students in their first year of participation in this type of program.

STUDY 2. LOG OF STUDENT PERFORMANCE IN THE MODEL SCHOOL PROGRAM

Introduction

Rationale

The Model School program outcomes were specified in two ways. The first way was a broad-based statement of each objective in which observation method and criteria were specified. The second was a list of highly specific performances, or micro-objectives, which when taken in clusters form the objectives. This study examines the performance of students, as observed by teachers in the classroom on the level of the micro-objectives. It was carried out for two distinct reasons: by asking teachers systematically to check and record students' behavior, a very broad-based, although subjective, measure of student performance could be obtained; and by having the teacher keep the record, it was felt that each teacher's attention would be drawn to the students in her class who could and could not perform each objective. Thus, the log served both a product-evaluation function and a process-evaluation function.

Objectives

Performance Objective 1.1 - Communication skills in the first language in the prekindergarten program (English or Spanish). Ninety percent of the students in the prekindergarten program will be able to carry out each of the skills specified in the prekindergarten program guide for the first language.

Performance Objective 1.2 - Communication skills in the second language in the prekindergarten program (Spanish or English). Ninety percent of the students in the prekindergarten program will perform each of the skills specified in the prekindergarten program guide for the second language.

Performance Objective 1.3 - Development of number concepts in the prekindergarten. Specific number skills are to be learned, some by 90% of the students, others by at least 60% of the students. In the presentation of the data, the correct percentage will be indicated.

Performance Objective 1.4 - Natural and biological phenomena within the perceptual grasp of the prekindergarten student. About 60% of the students will carry out 80% of the science activities specified in the prekindergarten program guide, for an overall minimum of about 48% satisfactory performance on each skill.

Performance Objective 2.1 - Growth of communication skills in the first language in the kindergarten program (English or Spanish). Ninety percent of the students in the kindergarten program will be able to carry out each of the specific communication skills indicated in the kindergarten program guide for the first language.

Performance Objective 2.2 - Growth of communication skills in the second language in the kindergarten program (Spanish or English). Ninety percent of the students in the kindergarten program will be able to carry out the specific skills specified in the kindergarten program guide for the second language.

Performance Objective 2.3 - Development of number concepts in the kindergarten. Ninety percent of the students will be able to perform the number skills specified in the kindergarten guide.

Performance Objective 2.4 - Natural and biological phenomena in the grasp of the kindergarten pupil. Ninety percent of the students in the kindergarten will perform each of the skills specified in the science section of the kindergarten program guide.

Performance Objective 3.1 - Growth of communication skills in the students' first language in the first grade (English or Spanish). Ninety percent of the students will be able to perform each activity in the first-grade program guide for the first language.

Performance Objective 3.2 - Growth of communication skills in the students' second language in the first grade (Spanish or English). Ninety percent of the students will be able to perform each of the activities specified in the first-grade program guide for the second language.

Performance Objective 3.3 - Development of number concepts in the first grade. Ninety percent of the students will be able to carry out the number skills specified in the first-grade program guide.

Performance Objective 3.4 - Natural and biological phenomena in the first grade. Eighty percent of the students will be able to carry out each of the science activities specified in the first-grade program guide.

Performance Objective 3.7 - Reading and writing. Ninety percent of the students will be able to carry out each of the five specified reading and writing activities in their mother tongue (as well as begin to use the reader series in their mother tongue).

In addition to these product objectives, the program has specified an enabling objective for each grade level, stating that teachers in the program would engage the students in the activities specified in the guides as cited above.

Procedure

Program Description

The teachers in the Model School program treated the detailed micro-objectives as a skeleton which they fleshed out by developing specific day-by-day lesson plans. These plans were examined and reviewed

by program supervisors who assured that they were in conformity with the specified program contents and with what the supervisors regarded as good teaching practice.

Each teaching team, consisting of an Anglo teacher and a Latino teacher, planned these activities so that all concepts and skills were introduced in the student's mother tongue, and a selected group of them, specified in the program guides, were followed up in the second language. An attempt was to be made to follow loosely the order of presentation shown on the time charts for each level; however, justified departures from the specified time sequence were accepted.

Evaluation

Instrument. The log consisted of a large sheet of paper, divided into a grid. Along one edge of the table the name of each student in a teacher's class appeared; along the second perpendicular edge of the table the name of each micro-objective appeared. The teacher recorded the date on which she observed satisfactory performance on a micro-objective by a student on the intersection of the column containing the student's name and the row containing the objective name.

It was originally planned that students' performance would be observed as part of the ongoing classroom interaction, and would be recorded at the end of the day. Teachers found that this was not feasible. This was replaced by a more formal observation of student performance at a time set aside for this purpose--usually while the teacher's teammate worked with the total group of students assigned to the team. At these observations the teachers examined students on the specific objectives which they felt they had completed teaching to their classes. Most teachers carried out observations throughout the year, with heavy concentrations around January, March, and April. The logs were collected on April 15, and therefore contain the record of student performance up through that date.

Subjects. All students who were in the experimental bilingual classes when the program began and who remained in it until the last day of observation (April 15) were included in the analysis. The results were therefore to be parameters of this population. However, one teacher in the first grade failed to keep an adequate record for the students of her team, although feedback about the inadequacy of the record was provided early enough in the school year for corrective measures to be taken. This teacher was Latino and taught about half of the first-grade Latinos in their first language and half of the Anglos in their second language. The performance of students on these skills is excluded from the analysis. According to supervisors' reports, this teacher did seem to be carrying out the program adequately and the supervisors feel that students in her classroom can probably perform at least as well as those in the other first-grade classes.

Analysis. In this study, there has been no sampling of students. The findings are clearly parameters of the participant population in the prekindergarten and kindergarten levels. In the first grade, the observed

performance of Anglos in their first language and of Latinos in their second language are parameters as well, but performances of some students in the Spanish language are missing because of the one teacher's failure to keep a proper log. In none of the these cases is statistical inference appropriate. Therefore, the only manipulations of the data made were those used to summarize findings and to compare them with minimum-performance criteria.

Note, however, that the last date for performance observation using this measure was April 15, and not the last day of school. This suggests that the measured level of attainment could be less than that specified in the objective, without precluding the possibility for every student to meet the criterion by year end.

A rough approximation of the level that could be expected on April 15 was obtained by a linear proration of the criterion for each objective by the portion of the school year which had passed before the observation date. This portion was 72%. Thus, an objective wherein performance should be 90% correct at year end was prorated to 65% at April 15.

Results

Prekindergarten

Performance of students on each micro-objective specified for the prekindergarten classes is shown in Figure 2.1. This figure continues for three pages. Thirty-four Anglos and thirty-four Latinos were observed.

Objective 1.1 - Prekindergarten communication, first language. This objective consisted of 29 micro-objectives. As this objective had a criterion of 90% of students attaining each micro-objective by year end, the typical micro-objective should be attained by 65% on April 15. This objective was clearly being attained--and exceeded--by both Anglos and Latinos.

Among Anglos, every micro-objective but one--Distinguishes Gustatory Stimuli--is reported as being above the criterion level, with 24 (83%) of the micro-objectives attained by 90% of these students. The mean rate of attainment of the Anglos on all parts of Objective 1.1 was 91.4% of the students performing each one satisfactorily. The gustatory stimuli objective was not performed by any student, indicating that this activity had not been carried out and observed in the class.

Among Latinos, performance was not quite so high as among the Anglo group, but it was still clearly beyond the minimum of 65%. Only three micro-objectives were below this criterion--Naming Classmates, Matching Clothing to Body Parts, and Obeying Sit/Stand. No student had carried out the classmate-naming activity, indicating that it was observed before the data were collected. Thirty-seven percent of the students had carried out the clothing-matching activity and 40% used "please" correctly, indicating that these micro-objectives had been introduced but not all students could perform them satisfactorily.

The mean performance rate for Latinos was 75.4%, which is clearly above the 65% required.

Objective 1.2 - Prekindergarten communication, second language. The criterion was 90%; therefore, an average of 65% per micro-objective was expected by April 15 on each of the 24 specified skills. As can be seen in Figure 2.1, this level was exceeded on all but three micro-objectives by the Anglos--Matches Clothing, Obeys Sit/Stand, and Names Classmates. Matching clothing and obeying sit/stand were not observed before the cutoff date. Naming classmates was carried out by only a few (6%) of these students. The mean performance rate on the micro-objectives for Anglos on Objective 1.2 was 85.3%, which is well above the minimum.

The findings were similar for Latinos, whose performance exceeded the minimum on all but two micro-objectives--Matches Clothes and Identifies Eye Color--which were not observed. The mean number of Latino students performing each micro-objective was 79.5%, which was clearly above the minimum.

Objective 1.3 - Number concepts. The findings for this objective are shown in Part III of Figure 2.1. The criterion was 60% performance by year end for most micro-objectives, which led to an expected average performance level of 43% by the observation date. Three number micro-objectives had performance levels of 90%, leading to expected performance at 65%.

Anglos exceeded these levels on 10 of the 11 number-concept skills. Coat Hook Number was not observed, indicating that the teacher had not completed that activity with her class at the time the data were collected. The mean rate of correct performance on these items was 81.5% of the Anglo children, or nearly double that anticipated by the program staff. In addition, the teachers reported that 91% of the Anglo students learned to sing a number song in Spanish, and from 35% to 65% of the students were capable of answering "How Many ___?" and stating their ages in the second language. These performances were more complicated than those required by the objectives.

Latino performance was also at a high level on this objective, with the minimum performance level exceeded on all but two micro-objectives. The Latino teacher had not yet observed Latinos singing number songs, nor engaged them in the Introduction-to-Addition activities to a point where observation was warranted. The average performance level on all micro-objectives was at 66.3% on each objective, which is clearly above the minimum specified. In addition to these activities, 85% of the Latinos learned to sing a number song, answer "How many ___?" and state their ages in English. This was a greater percentage of students than had been observed carrying out these activities in their mother tongue.

Objective 1.4 - Prekindergarten science. The five activities which made up this objective are shown on Figure 2.1, Part III. The minimum year-end performance for this objective was 48% (60% of the children carrying out 80% of the activities). If this is prorated, average performance level of only 35% is required. Both Anglo and Latino children exceeded this minimum level. Among Anglo children, the minimum was exceeded on all five micro-objectives, with a mean of 83.4%. The Latino

teacher observed performance of the Latino children on four of the five. Student performance exceeded this minimum on those four, and the average of all five was 46.4% of the children, which was above the minimum.

Kindergarten

Figure 2.2 shows the teachers' evaluations of student performance on the micro-objectives in the kindergarten program. This figure extends for five pages.

Objective 2.1 - Kindergarten first-language skills. The criterion for this objective was 90% by year end; the prorated goal was an average of 65% satisfactory performance on the 48 micro-objectives specified for first language in the kindergarten program guide.

Both Anglo and Latino kindergarten teachers report having carried out, by April 15, activities related to the acquisition of all first-language micro-objectives but one--identification of the nurse. During the 1969-1970 school year, no nurse was on duty at Potter-Thomas; so this item was skipped by the teachers.

Examining the scoring of the Anglos shows that the Anglo kindergarten teacher observed performance beyond the 65% level on every first-language micro-objective (except Nurse), with 31 of the 48 performed satisfactorily by every Anglo student in the program. The mean level of performance of Anglos on the Objective 2.1 skills (including the nurse item as zero) is 93.8%, which is clearly above the minimum.

Performance among Latino students was somewhat more variable. All students were able to perform 8 of the first-language micro-objectives, but four--Where do you live, Identify Crossing Guard, Listening for Clues, Distinguishing Rhyming from Non-Rhyming Words--were attained in less than half the students by the observation date. Nevertheless, performance was substantially better than required by the prorated objective, with the mean performance rate at 82.1% over the 48 micro-objectives.

Objective 2.2 - Kindergarten second-language skills. Thirty-four micro-objectives comprised the skills which kindergarten pupils were expected to master in their second language. The criterion specified for their objective was 90% of the students able to perform each micro-objective; so 65% was the prorated goal.

As can be seen, the teachers report sharp differences in second-language learning in the two ethnic groups, with Latinos' performance generally superior to that shown by Anglos.

The Anglo group was not yet examined on 10 (29%) of the specified micro-objectives as of April 15. Where the observation was made, the Anglos' percentages attained ranged from a low of 26% (Walk!) to a high of 92% (Uses Good Morning).

The average level of performance was 50.2% of the pupils successful per micro-objective. This about 15% lower than the prorated criterion.

In contrast, Latino students were examined on all but three (9%) of the micro-objectives for second language in the kindergarten. The level of attainment on objectives observed covered a wide range, with a low of 16% performing the tactile discrimination activities, but with 17 objectives performed successfully by every class member. The mean level of performance for the Latino group was 81.3%, which is well above the prorated criterion.

It should be noted that five first-language objectives not required in the second language were also accomplished in English by from 34% to 74% of the Latino students.

Objective 2.3 - Number concepts. Thirteen activities were specified for this objective--eleven in the first language and two in the second language. As the criterion for this objective specified that performance would be at 90% of the students succeeding at each micro-objective, a mean of 65% would indicate satisfactory performance at the observation date.

Anglo students had been engaged in all but three activities--Leading Class in a Number Game, Weighing an Object, and Telling the Date from a Calendar. The mean percentage of Anglo students performing each micro-objective was 70.9%, which was above the criterion.

Latino students had been engaged in all but three micro-objectives--Weighing an Object, Telling Time, and Using a Calendar--when the logs were tabulated. On the objective as a whole, the mean performance rate for Latinos was 51.2%, which was not up to the prorated criterion. However, in addition to these activities, Latino students are reported as having been able to Answer Number Questions (77%) and Give their Phone Numbers (39%) in English.

Objective 2.4 - Natural and biological phenomena. The results reported by the teachers suggest that sharp differences in the study of science occurred in the Anglo and Latino groups.

The prorated criterion for this objective was satisfactory performance by 65% of the students on the ten micro-objectives.

As shown on Figure 2.2, Anglo students were observed performing all of the micro-objectives but one--Making Butter. The mean percentage of students satisfactorily performing them was 83.1%, which is beyond the minimum.

Latinos presented a markedly different picture. Only two objectives--Describes Day and Night, and Identified Domestic Animals--were observed in the mother tongue. However, the students were observed performing seven of the ten activities in English, their second language, with performance reported at 94% or above on each.

First Grade

By the first-grade level, the number of micro-objectives delineated had become so great that recording of each individual one was inconvenient. Therefore, in keeping the logs, it was agreed that some objectives in the first- and second-language skills would be clustered: for example, the oral-commands micro-objectives would be recorded as a unit--"Follows Ten Oral Commands." This resulted in each specified micro-objective on the first-grade level requiring a more complex series of acts than the highly specific micro-objectives of the two earlier grades. This is especially true about the activities specified for the first and second languages.

A second point to be noted with regard to the performance of the first-grade level is that the number of cases observed did not remain uniform throughout. There were two teams for a total of four teachers in the model school at this grade level. In one of the teams the Latino teacher failed to keep an adequate log, in that the material was not observed consistently throughout the school year and her record was not in the same observational units as those of the three other teachers. Faced with this situation, it seemed best to exclude that teacher's students from the evaluation of the objectives where she was to keep the record. These objectives were 3.1, 3.3, 3.4, and 3.7 for Latinos and 3.2 for Anglos. Thus, among Anglos, 59 students were observed for 3.1, 3.3, 3.4 and 3.7 but 27 students were observed for objective 3.2. Among the Latinos, 28 students were observed for objective 3.2. The findings for the attainment of these objectives are shown on Figure 2.3, which runs for three pages.

Objective 3.1 - Communication skills in the first language. This objective specified 90% at year end for each micro-objective, which was prorated for the shortened observation period so that a 65% average level of observed attainment then indicated satisfactory progress.

In both Anglo and Latino classes all objectives were taught so that at least some students had completed each one.

Among Anglos, more than 65% of the students were successful in completing all the micro-objective clusters but one--Identifying Household Equipment--which was completed by 42%. The mean level of attainment was at 91.7%, which is well beyond the required minimum.

Latinos did not achieve the micro-objectives at quite the same high rate as the Anglos, but still were at a satisfactory level. Of the 18 micro-objective clusters, 13 were beyond the 65% criterion, with five below it. However, for the point in time when observation was made, the overall level was a satisfactory 73.8% of the Latinos having completed the typical micro-objective group.

Objective 3.2 - Second language. On the second-language skills, the results showed a reversal, with Latino students' performance superior to that of the Anglos. The performance criterion for year end was 90%, which would mean that an average 65% on the micro-objectives should have been achieved by the final observation date.

At least some students in both language groups completed each of the clusters of second-language objectives, indicating that the teachers had introduced each to the point where they felt observation of at least some students was warranted.

None of the seven micro-objective clusters was reported as being completed by the expected 65% of the Anglo students. The average portion of the students who attained each was 37.6%, well below the criterion. Among Latino students, four of the seven micro-objective clusters were performed at levels exceeding the 65% criterion and three were below it. Overall, the mean performance was 65.6% of the students successfully completing the micro-objective clusters, which was just slightly above the expected level.

In retrospect, it appears that the relatively low level of performance of Anglos on this objective might in part result from the observational method. When the teacher recorded the performance of a student on a cluster of objectives such as "Following Ten Oral Commands," the student would have to be able to follow all ten to get credit for any. Recording the student's performance on an item-by-item basis might have revealed that he could carry out 9 of the 10 commands. Thus, the method of recording used may have resulted in an underestimate of the true level of skill.

Objective 3.3 - Number concepts. The number-concepts objectives were not attained in either Anglo or Latino groups, although Anglo students appear to have had better mastery on the objective as specified in the proposal. Ninety percent was expected by year end; 65% was the criterion for the last observation.

Among Anglo students, some were observed carrying out every micro-objective but one--Matching Numbers to Body Parts. Overall, the level of performance was quite low, with 42.4% of the students completing the typical objective.

Among Latino students, at least some students were reported as having completed seven of twelve micro-objectives. The mean percentage of Latinos able to perform each micro-objective was 22%. In addition, teachers reported that all Latino students could do some counting in both Spanish and English, but none were reported as able to count as high as 100.

Objective 3.4 - Science. Objectives for first-grade science specified 80% attainment by year end, suggesting that 58% average attainment would be an appropriate performance level for the observation date. As shown on Figure 2.3, the observed performance was below that level (35.0% for Anglos and 45.7% for Latinos). There were also some ethnic

group differences worthy of note. At least some Anglo children had been observed carrying out all skills except one--Plant and Animal Identifications. Latino students had not been observed on two of the activities--Weather Activities, and Plant and Animal Identifications--but they exhibited higher levels of performance on the ones observed. This was especially true of the activities in the second language.

Objective 3.7 - Reading and writing in the first language. Five activities were specified for preparation of students for reading, reinforcing reading, and introducing manuscript writing. All were specified as having a 90% criterion level, which suggested that by the observation date the mean portion of students successfully performing them should be 65%.

Among both Anglos and Latinos, this level was exceeded on four of the five activities. The mean for Anglos was 86.8%; the mean for Latinos, 77.8%. In addition, teachers reported that students engaged in some second-language reading-readiness activities. Some Anglos had been observed successfully carrying out Phonics (26%) and Literature (4%) activities. Some Latinos had also been observed successfully carrying out four activities--Phonics (2%), Word and Picture (43%), Experience Charts (2%), and Literature (36%).

Conclusions

As expected in new programs, the results derived from the teachers' logs show a mixed picture, in which some objectives were attained and others were not. The pattern of successes and failures is systematic enough to be informative:

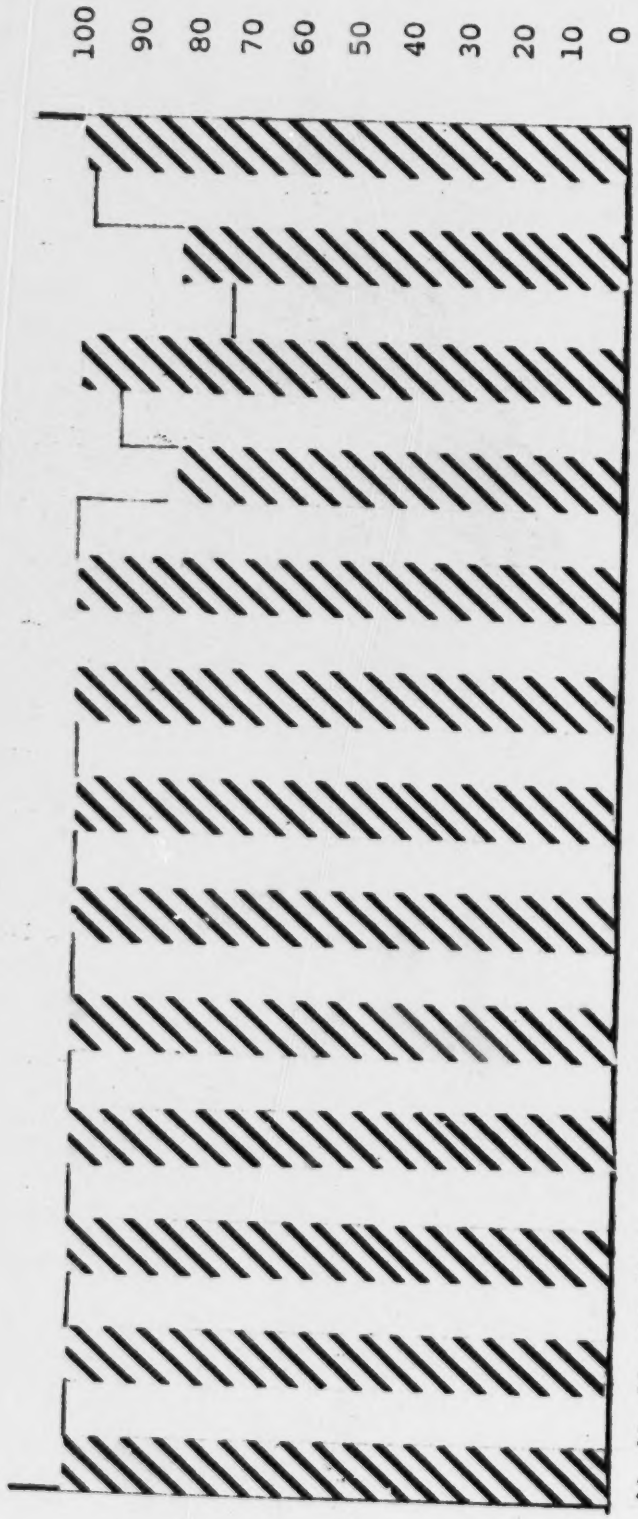
- The prekindergarten program was highly successful in that it attained all four objectives set for it.
- Verbal-skills objectives for the mother tongue, including prereading activities, were attained in the kindergarten and in first grade.
- Second-language verbal-skills objectives were attained by Latinos but not Anglos in the kindergarten and in first grade.
- Science and arithmetic objectives present a mixed picture, with Anglos achieving them successfully in kindergarten, but both Anglo and Latino students failing to do so in the first grade.

These findings led to some discussion with program supervisors. The findings regarding the mathematics and science objectives in the upper two grades probably resulted from an indecision on the part of the program management and teachers on the degree of emphasis to place on the second language. It was felt in December and January that it was worth trying to introduce science activities in the students' second language, although this had not been specified in the program guides. After several weeks'

trial, this plan was rescinded, and science activities were then reintroduced in the first language. Arithmetic work in the second language was then emphasized. This switching of commitments occurred around the middle of March, 1970, which was only one month before the final observation date. The program supervisors believe that there was a marked improvement in these skills once the problems were resolved and there was a clear commitment. Some evidence that this could occur is the high level of attainment on some micro-objectives in the science and number-skill areas in the second language among Latinos, even where it was not specified as part of the program.

A more serious problem seems to be the difference in performance of Anglos and Latinos in the second language. At present, the program document reads as if acquisition of the second language were equally difficult for both ethnic groups. The fact that Latino students are immersed in an English-speaking environment to a much greater extent than Anglos are immersed in a Spanish one suggests that this parallelism may be inappropriate and that specification of different goals for the two groups is warranted in the future.

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE



Objective 1.1 (First language)

1. Self-Ident. - First Name
2. " " - Second Name
3. Identifies own Eye Color
4. Identifies own Hair Color
5. Matches Cloths to Body Parts
6. Identifies Family Members
7. Names some classmates
8. Distinguishes Auditory Stimuli
9. " Tactile "
10. " Gustatory "
11. " Visual "
12. " Olfactory "
13. Obeys "Sit!"/"Stand!"
14. " "Come here!"
15. " "Give me_____!"
16. " "Show me_____!"
17. " "Put away_____!"
18. " "Be quiet!"
19. " "Look!"
20. " "Listen!"
21. " "Get the_____!"
22. " "Walk!"
23. " "Run!"
24. " "Jump!"
25. Uses "Good morning"/"Good afternoon"

PERCENT LATINOS COMPLETING MICRO-OBJECTIVE

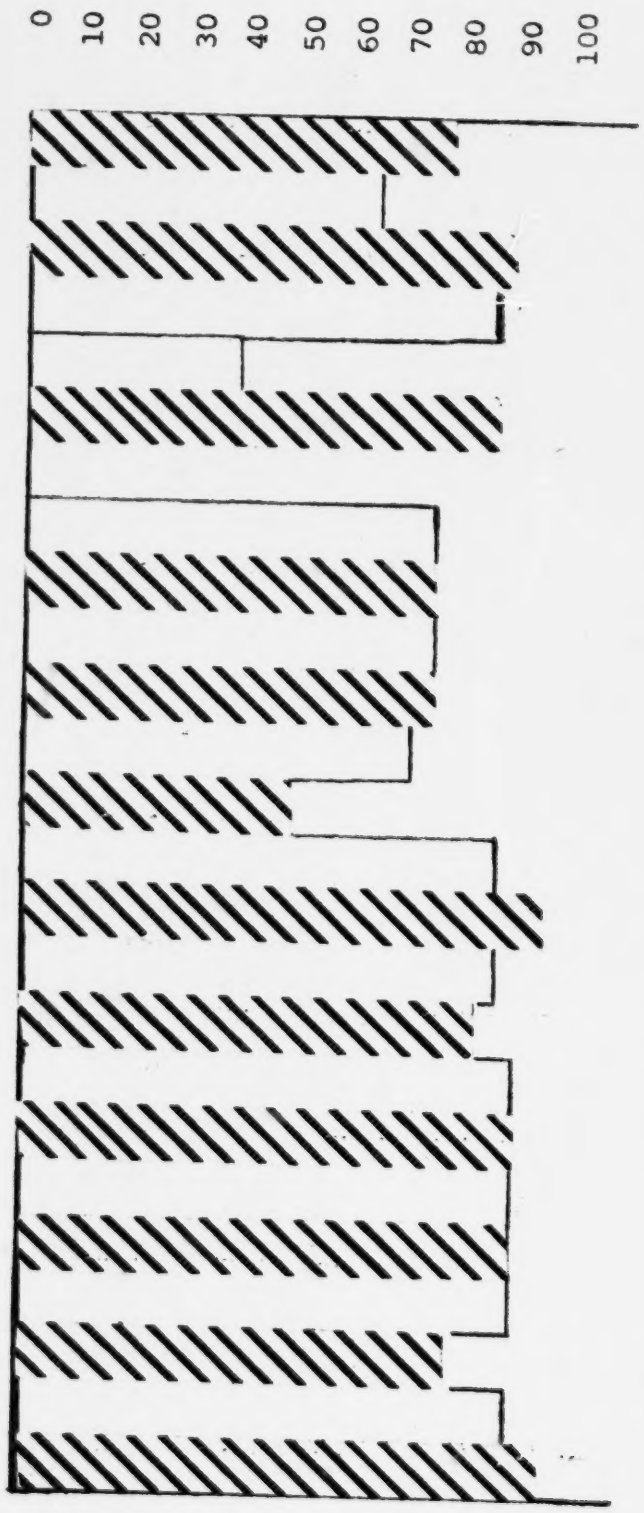


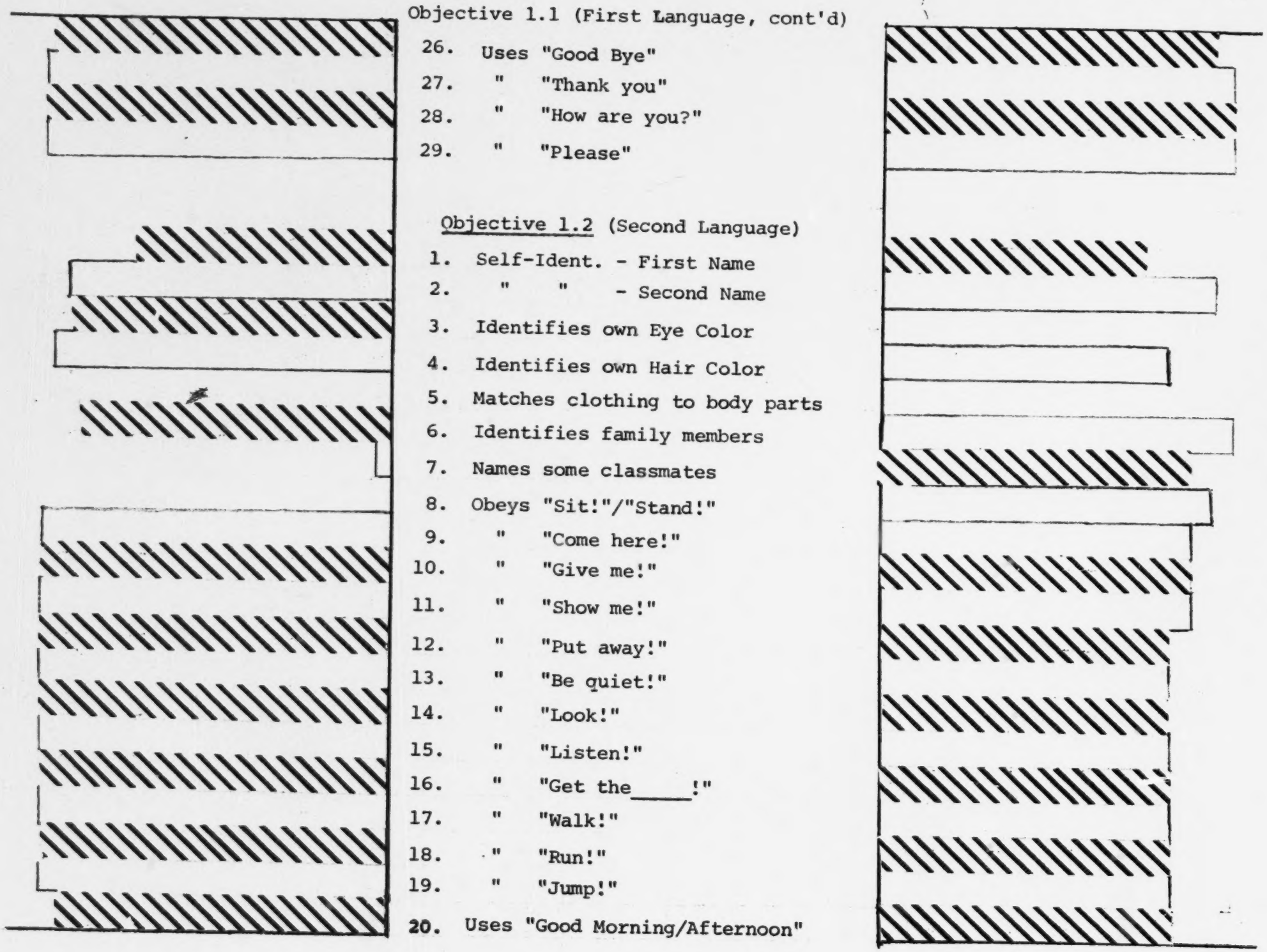
FIGURE 2.1. PERCENT OF PREKINDERGARTEN STUDENTS OBSERVED CORRECTLY PERFORMING MICRO-OBJECTIVES, PART I

PERCENT ANGLOS COMPLETING MICRO OBJECTIVE

100 90 80 70 60 50 40 30 20 10 0

PERCENT LATINOS COMPLETING MICRO OBJECTIVE

0 10 20 30 40 50 60 70 80 90 100



Objective 1.1 (First Language, cont'd)

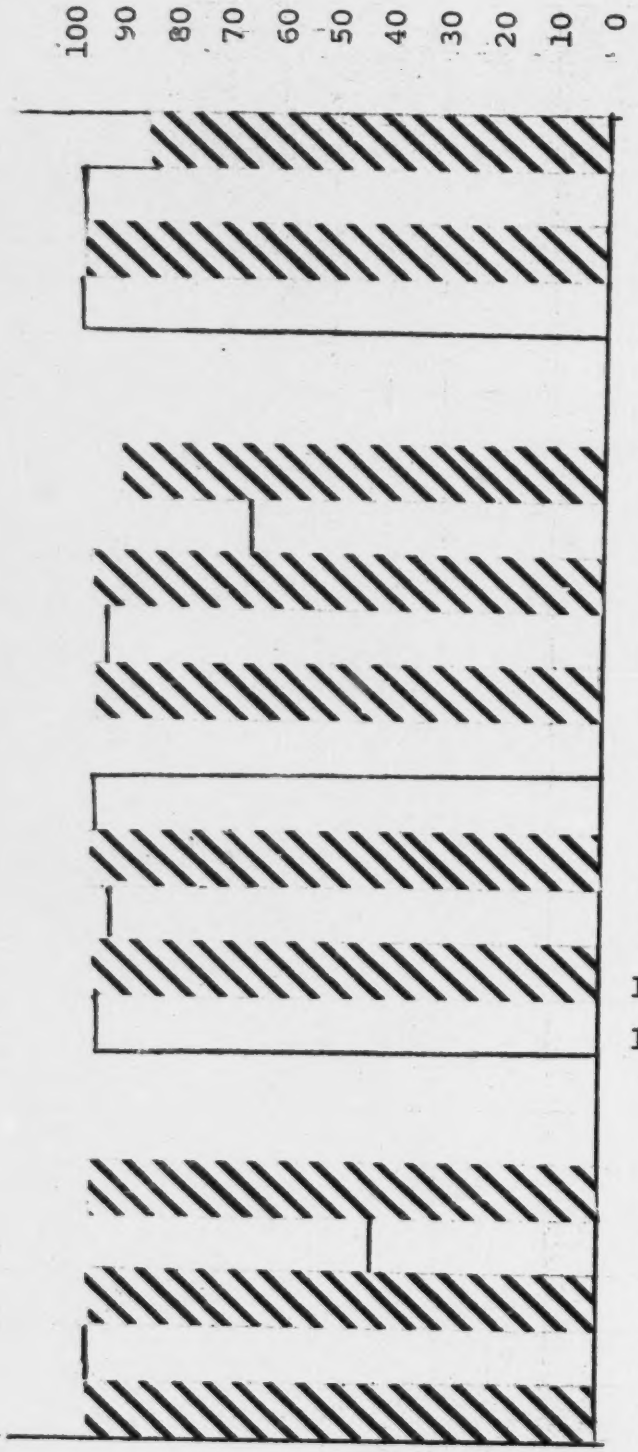
26. Uses "Good Bye"
27. " "Thank you"
28. " "How are you?"
29. " "Please"

Objective 1.2 (Second Language)

1. Self-Ident. - First Name
2. " " - Second Name
3. Identifies own Eye Color
4. Identifies own Hair Color
5. Matches clothing to body parts
6. Identifies family members
7. Names some classmates
8. Obeys "Sit!"/"Stand!"
9. " "Come here!"
10. " "Give me!"
11. " "Show me!"
12. " "Put away!"
13. " "Be quiet!"
14. " "Look!"
15. " "Listen!"
16. " "Get the_____!"
17. " "Walk!"
18. " "Run!"
19. " "Jump!"
20. Uses "Good Morning/Afternoon"

FIGURE 2.1. PERCENTAGE OBSERVED CORRECTLY PERFORMING MICRO-OBJECTIVES, PART II

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE



Objective 1.2 (Second Language, cont'd)

21. Use "Good Bye."
22. " "Thank You."
23. " "How are you."
24. " "Please."

Objective 1.3 (Number Concepts)

1. Counts 1 to 10 (1st Language)
2. Counts 1 to 10 (2nd Language)
3. Sings Number Song
4. Answers "How Many?"
5. Answers "How old are you?"
6. Recognizes coat hook number.
7. Introduction to addition
8. Weight comparisons
9. Discriminates Shapes-Circle
10. " " -Triangle
11. " " -Square

Objective 1.4 (Science)

1. Weather activities
2. Identifies seasons
3. Day vs. Night activities
4. Recognizes animals
5. Recognizes plants

PERCENT LATINOS COMPLETING MICRO-OBJECTIVE

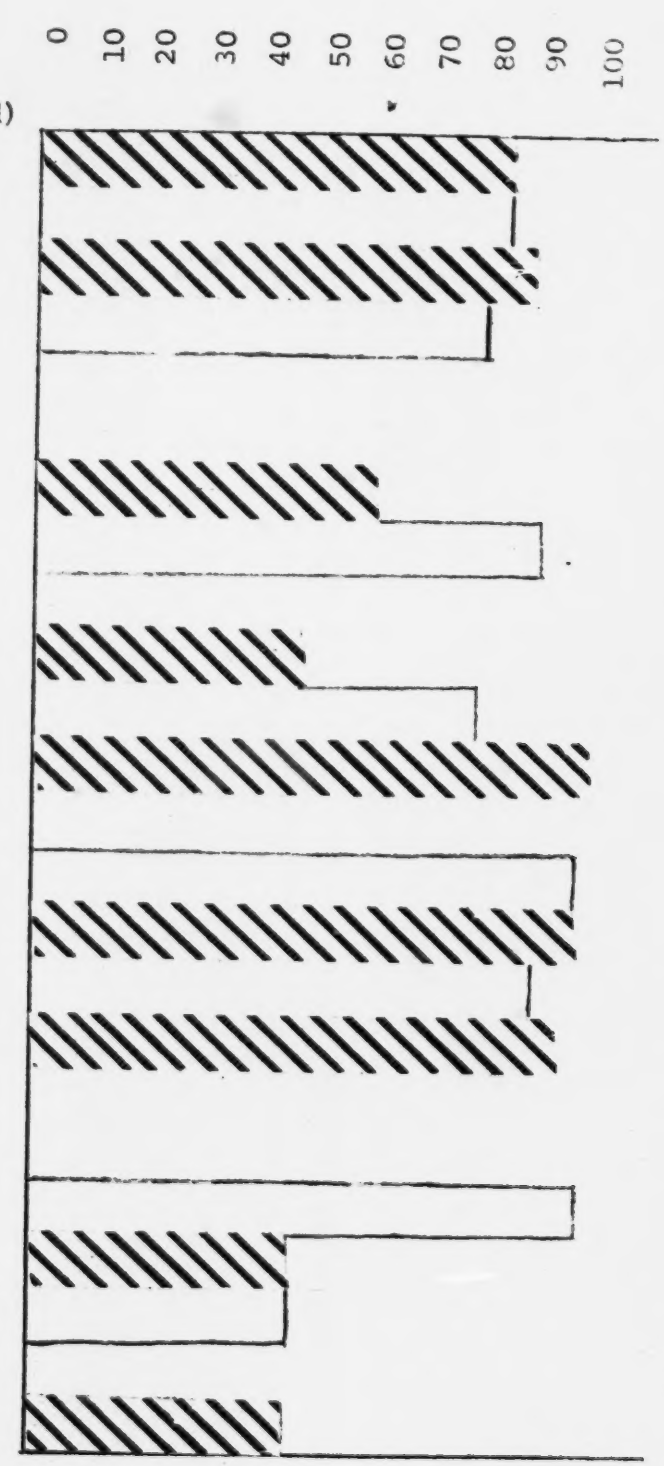


FIGURE 2.1. PERCENTAGE OBSERVED CORRECTLY PERFORMING MICRO-OBJECTIVES, PART III

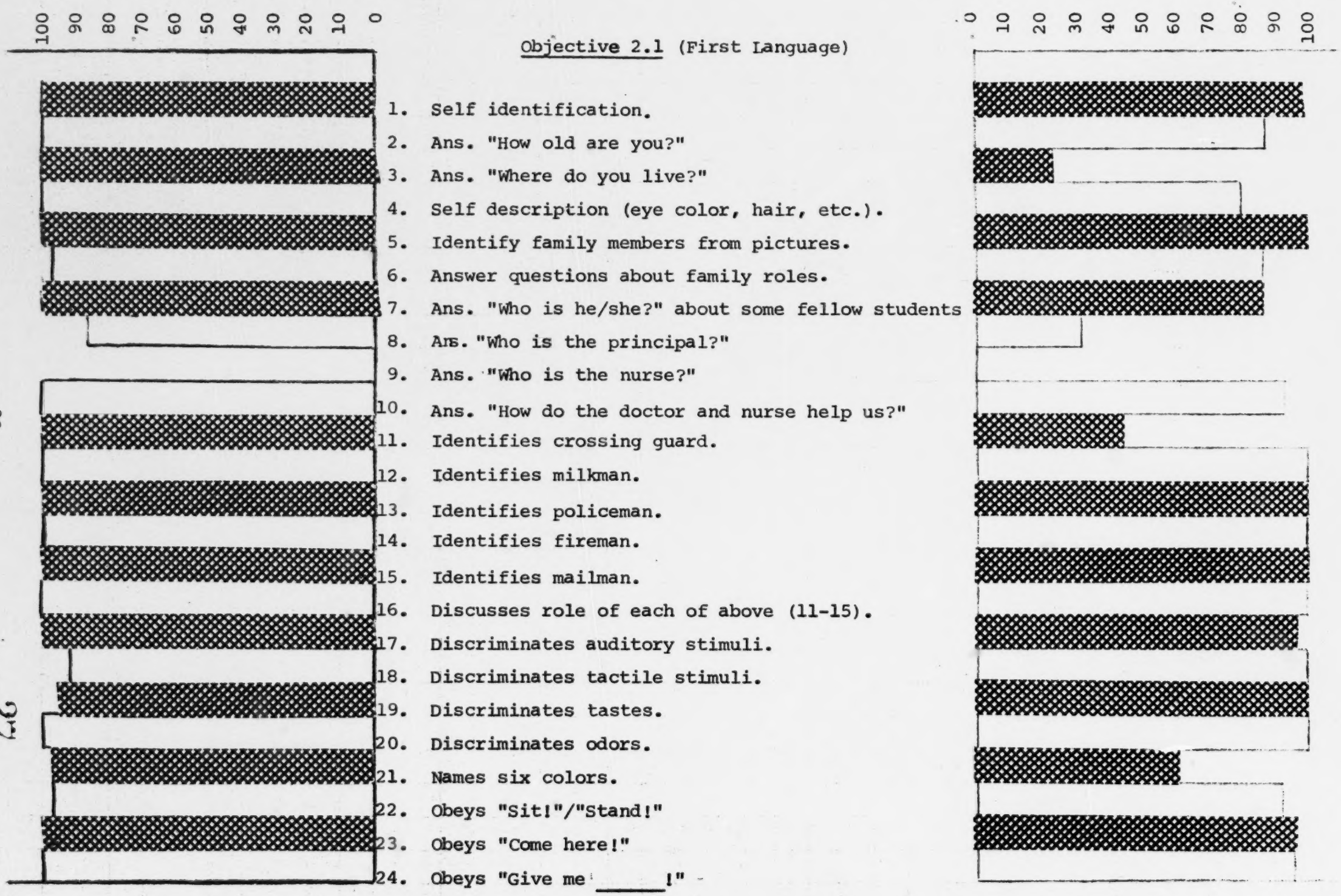
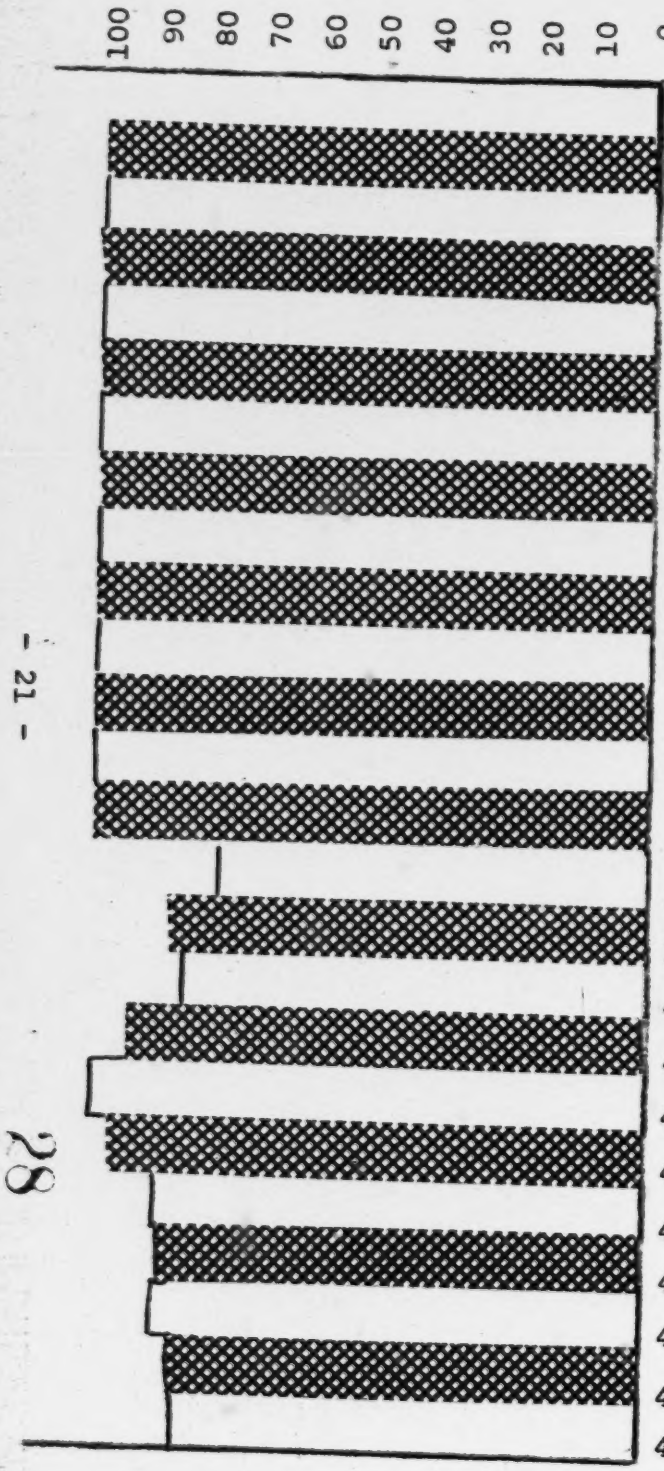

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE
100 90 80 70 60 50 40 30 20 10 0
PERCENT LATINOS COMPLETING MICRO-OBJECTIVE
0 10 20 30 40 50 60 70 80 90 100
Objective 2.1 (First Language)
1. Self identification.
2. Ans. "How old are you?"
3. Ans. "Where do you live?"
4. Self description (eye color, hair, etc.).
5. Identify family members from pictures.
6. Answer questions about family roles.
7. Ans. "Who is he/she?" about some fellow students
8. Ans. "Who is the principal?"
9. Ans. "Who is the nurse?"
10. Ans. "How do the doctor and nurse help us?"
11. Identifies crossing guard.
12. Identifies milkman.
13. Identifies policeman.
14. Identifies fireman.
15. Identifies mailman.
16. Discusses role of each of above (11-15).
17. Discriminates auditory stimuli.
18. Discriminates tactile stimuli.
19. Discriminates tastes.
20. Discriminates odors.
21. Names six colors.
22. Obeys "Sit!"/"Stand!"
23. Obeys "Come here!"
24. Obeys "Give me _____!"

FIGURE 2.2 PERCENT OF THE KINDERGARTEN THAT TEACHERS OBSERVED PERFORMING MICRO-OBJECTIVES (PART 1)

27

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE



Objective 2.1 (First Language) (Cont'd)

25. Obeys "Show me _____!"
26. Obeys "Put away _____!"
27. Obeys "Be quiet!"
28. Obeys "Look!"/"Listen!"
29. Obeys "Get the _____!"
30. Obeys "Walk!"
31. Obeys "Run!"
32. Obeys "Jump!"
33. Uses "Good Morning"/"Good Afternoon"
34. Uses "How are you?" and answers.
35. Uses "Please" correctly.
36. Uses "Thank you"/"Your welcome."
37. Listen for clues.
38. Compares initial consonants.
39. Distinguishes rhyming from non-rhyming words.
40. Identifies classmates by voice.
41. Engages in a conversation with a pupil.
42. Reads own name.
43. Counts letters in his name.
44. Indicates capital letter at beginning of name.
45. Traces and copies name.
46. Matches his name.
47. Picks out his name from a list.
48. Shows proper directional orientation of eyes.

PERCENT LATINOS COMPLETING MICRO-OBJECTIV

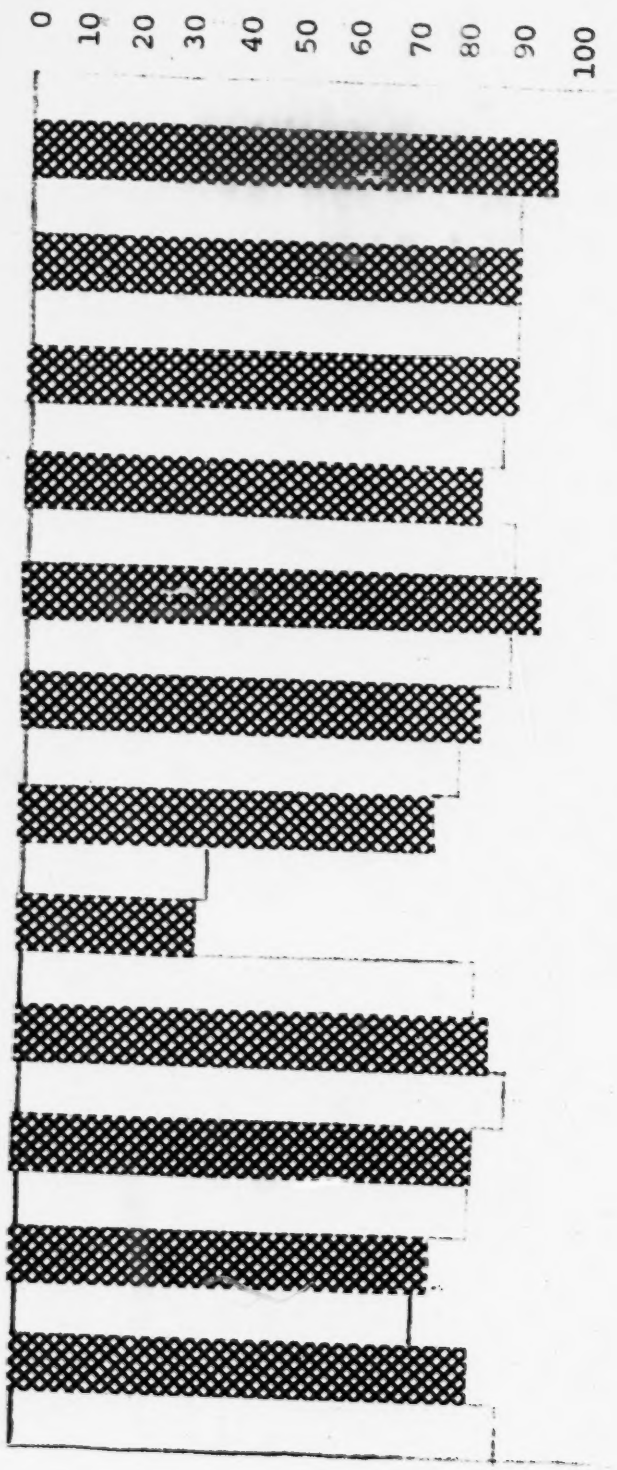


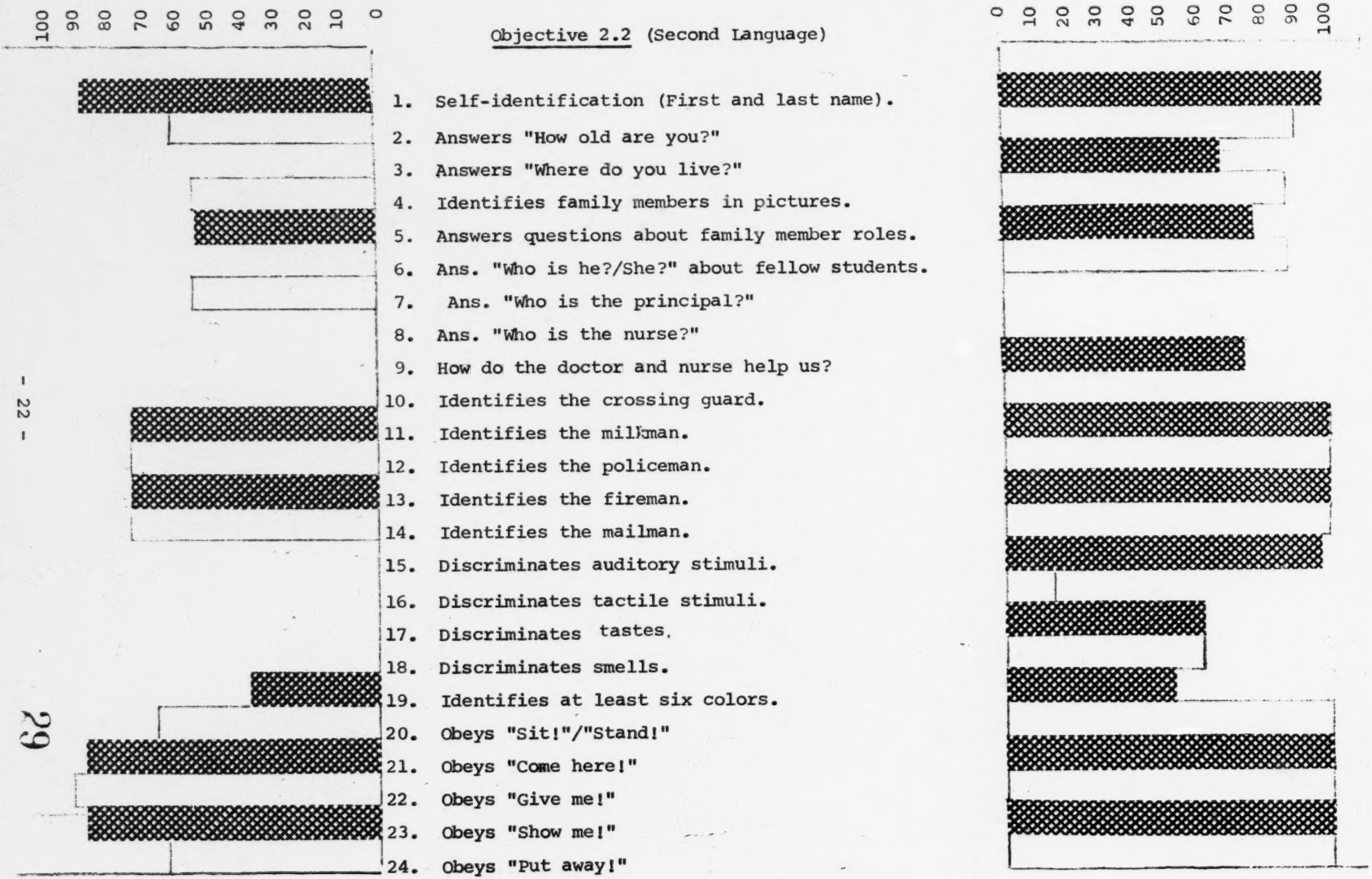
FIGURE 2.2. PERCENT OF THE KINDERGARTEN THAT TEACHERS OBSERVED PERFORMING MICRO-OBJECTIVES (PART2)

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE

100 90 80 70 60 50 40 30 20 10 0

PERCENT LATINOS COMPLETING MICRO-OBJECTIVE

0 10 20 30 40 50 60 70 80 90 100



Objective 2.2 (Second Language)

1. Self-identification (First and last name).
2. Answers "How old are you?"
3. Answers "Where do you live?"
4. Identifies family members in pictures.
5. Answers questions about family member roles.
6. Ans. "Who is he?/She?" about fellow students.
7. Ans. "Who is the principal?"
8. Ans. "Who is the nurse?"
9. How do the doctor and nurse help us?
10. Identifies the crossing guard.
11. Identifies the milkman.
12. Identifies the policeman.
13. Identifies the fireman.
14. Identifies the mailman.
15. Discriminates auditory stimuli.
16. Discriminates tactile stimuli.
17. Discriminates tastes.
18. Discriminates smells.
19. Identifies at least six colors.
20. Obeys "Sit!"/"Stand!"
21. Obeys "Come here!"
22. Obeys "Give me!"
23. Obeys "Show me!"
24. Obeys "Put away!"

FIGURE 2.2. PERCENT OF THE KINDERGARTEN THAT TEACHERS OBSERVED PERFORMING MICRO-OBJECTIVES (PART 3)

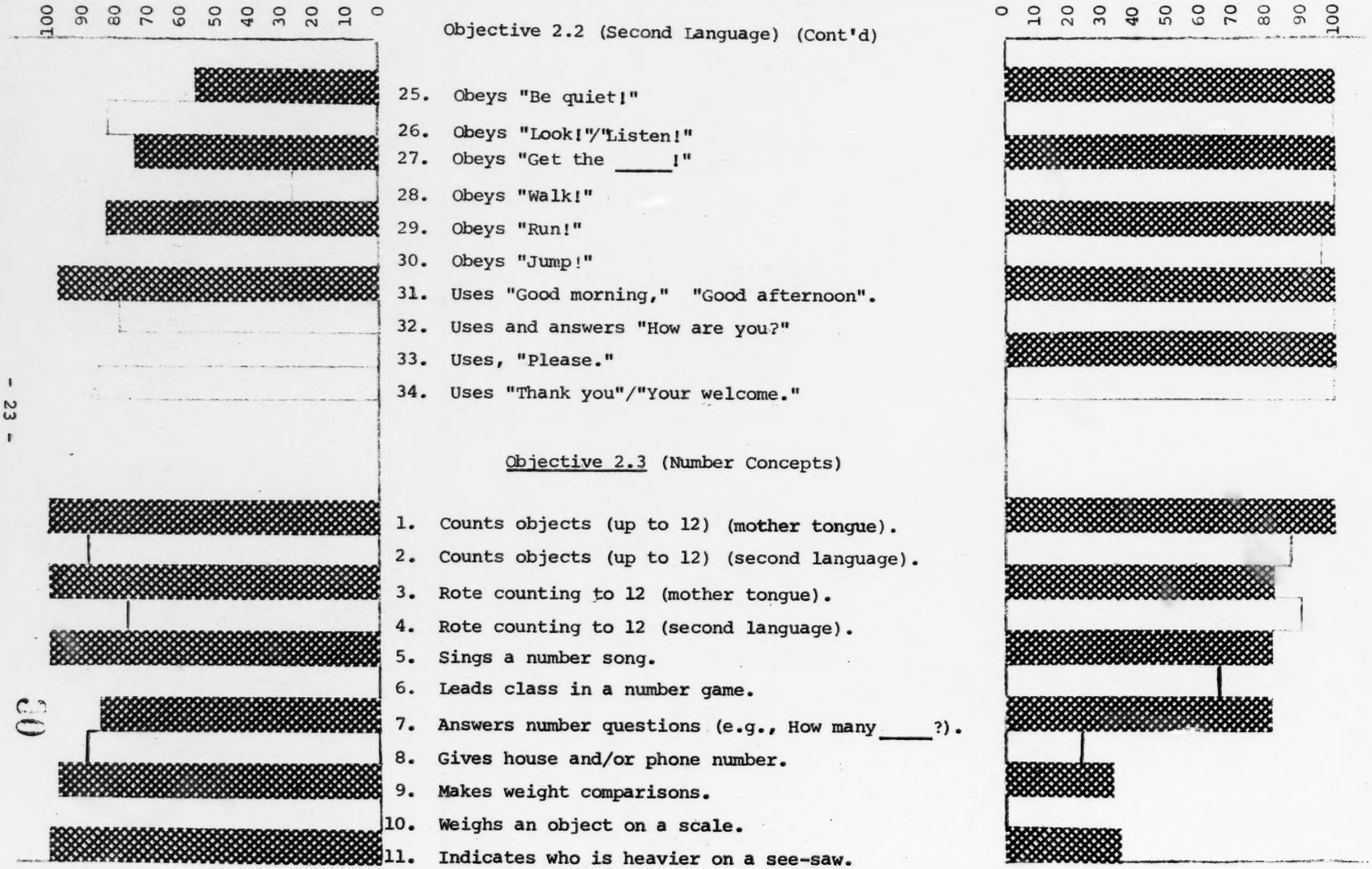

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE
100 90 80 70 60 50 40 30 20 10 0
PERCENT LATINOS COMPLETING MICRO-OBJECTIVE
0 10 20 30 40 50 60 70 80 90 100
Objective 2.2 (Second Language) (Cont'd)
25. Obeys "Be quiet!"
26. Obeys "Look!"/"Listen!"
27. Obeys "Get the _____!"
28. Obeys "Walk!"
29. Obeys "Run!"
30. Obeys "Jump!"
31. Uses "Good morning," "Good afternoon".
32. Uses and answers "How are you?"
33. Uses, "Please."
34. Uses "Thank you"/"Your welcome."
Objective 2.3 (Number Concepts)
1. Counts objects (up to 12) (mother tongue).
2. Counts objects (up to 12) (second language).
3. Rote counting to 12 (mother tongue).
4. Rote counting to 12 (second language).
5. Sings a number song.
6. Leads class in a number game.
7. Answers number questions (e.g., How many _____?).
8. Gives house and/or phone number.
9. Makes weight comparisons.
10. Weighs an object on a scale.
11. Indicates who is heavier on a see-saw.

FIGURE 2.2. PERCENT OF THE KINDERGARTEN THAT TEACHERS OBSERVED PERFORMING MICRO-OBJECTIVES (PART 4)

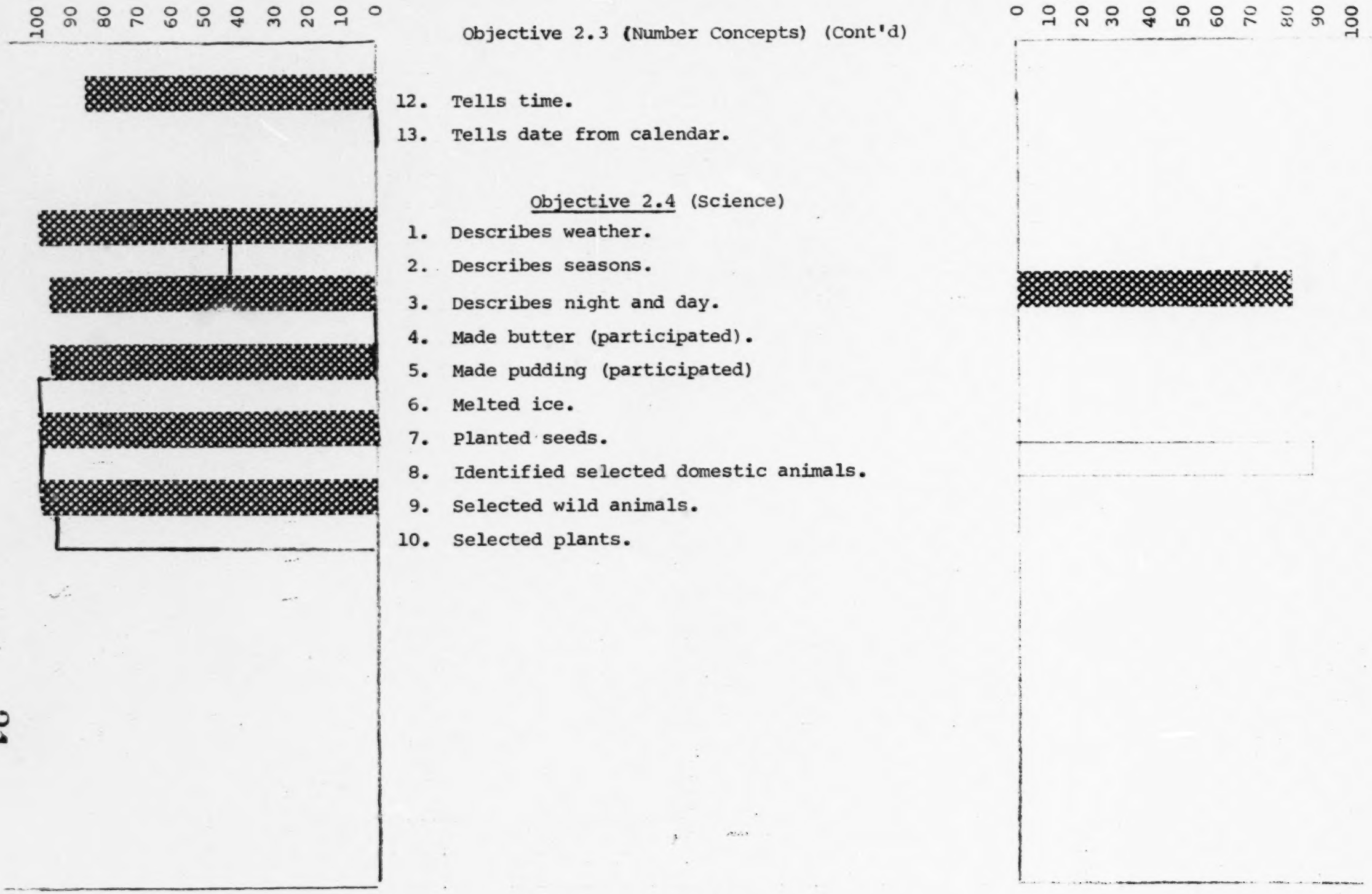

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE
100 90 80 70 60 50 40 30 20 10 0
PERCENT LATINOS COMPLETING MICRO-OBJECTIVE
0 10 20 30 40 50 60 70 80 90 100
Objective 2.3 (Number Concepts) (Cont'd)
12. Tells time.
13. Tells date from calendar.
Objective 2.4 (Science)
1. Describes weather.
2. Describes seasons.
3. Describes night and day.
4. Made butter (participated).
5. Made pudding (participated)
6. Melted ice.
7. Planted seeds.
8. Identified selected domestic animals.
9. Selected wild animals.
10. Selected plants.

FIGURE 2.2. PERCENT OF THE KINDERGARTEN THAT TEACHERS OBSERVED PERFORMING MICRO-OBJECTIVES (PART 5)

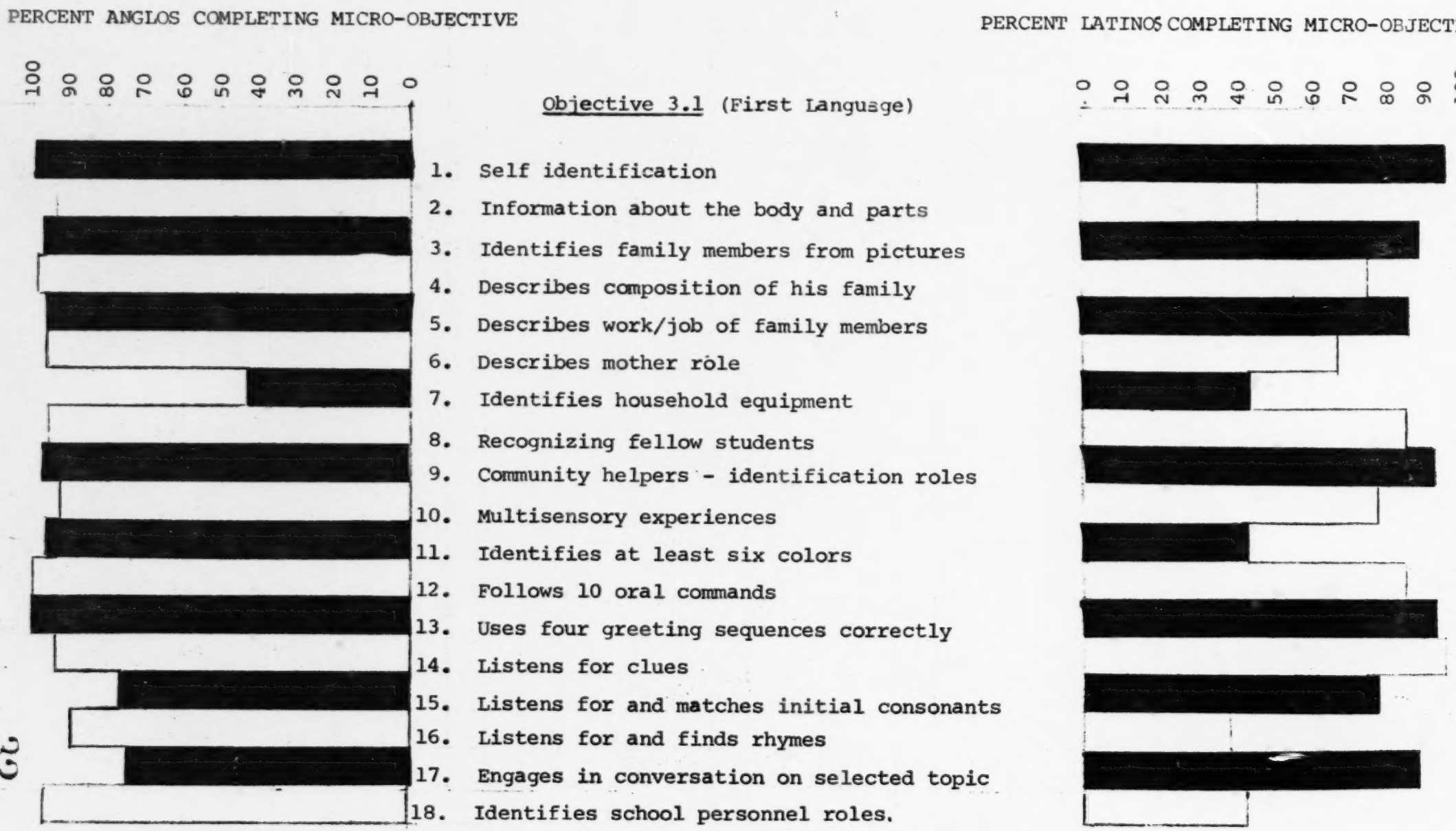

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE
100 90 80 70 60 50 40 30 20 10 0
Objective 3.1 (First Language)
1. Self identification
2. Information about the body and parts
3. Identifies family members from pictures
4. Describes composition of his family
5. Describes work/job of family members
6. Describes mother role
7. Identifies household equipment
8. Recognizing fellow students
9. Community helpers - identification roles
10. Multisensory experiences
11. Identifies at least six colors
12. Follows 10 oral commands
13. Uses four greeting sequences correctly
14. Listens for clues
15. Listens for and matches initial consonants
16. Listens for and finds rhymes
17. Engages in conversation on selected topic
18. Identifies school personnel roles.
PERCENT LATINOS COMPLETING MICRO-OBJECTIVE
0 10 20 30 40 50 60 70 80 90 100

FIGURE 2.3 PERCENT OF FIRST GRADE THAT TEACHERS OBSERVED CORRECTLY PERFORMING MICRO-OBJECTIVES (Part A)

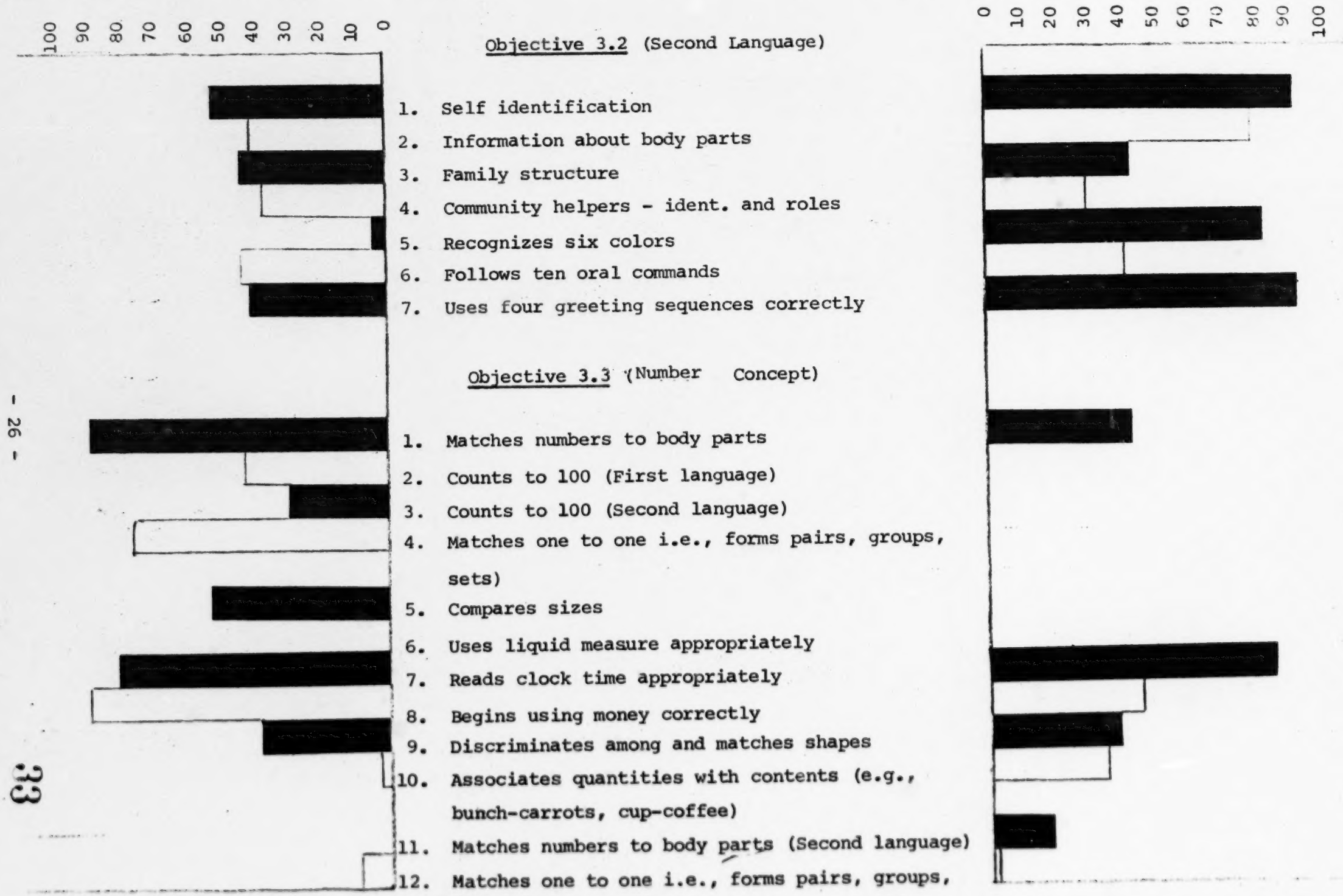

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE
100 90 80 70 60 50 40 30 20 10 0
Objective 3.2 (Second Language)
1. Self identification
2. Information about body parts
3. Family structure
4. Community helpers - ident. and roles
5. Recognizes six colors
6. Follows ten oral commands
7. Uses four greeting sequences correctly
Objective 3.3 (Number Concept)
1. Matches numbers to body parts
2. Counts to 100 (First language)
3. Counts to 100 (Second language)
4. Matches one to one i.e., forms pairs, groups, sets)
5. Compares sizes
6. Uses liquid measure appropriately
7. Reads clock time appropriately
8. Begins using money correctly
9. Discriminates among and matches shapes
10. Associates quantities with contents (e.g., bunch-carrots, cup-coffee)
11. Matches numbers to body parts (Second language)
12. Matches one to one i.e., forms pairs, groups, (Second language)
PERCENT LATINOS COMPLETING MICRO-OBJECTIVE
0 10 20 30 40 50 60 70 80 90 100

FIGURE 2.3. PERCENT OF FIRST GRADE THAT TEACHERS OBSERVED CORRECTLY PERFORMING MICRO-OBJECTIVE (Part B)

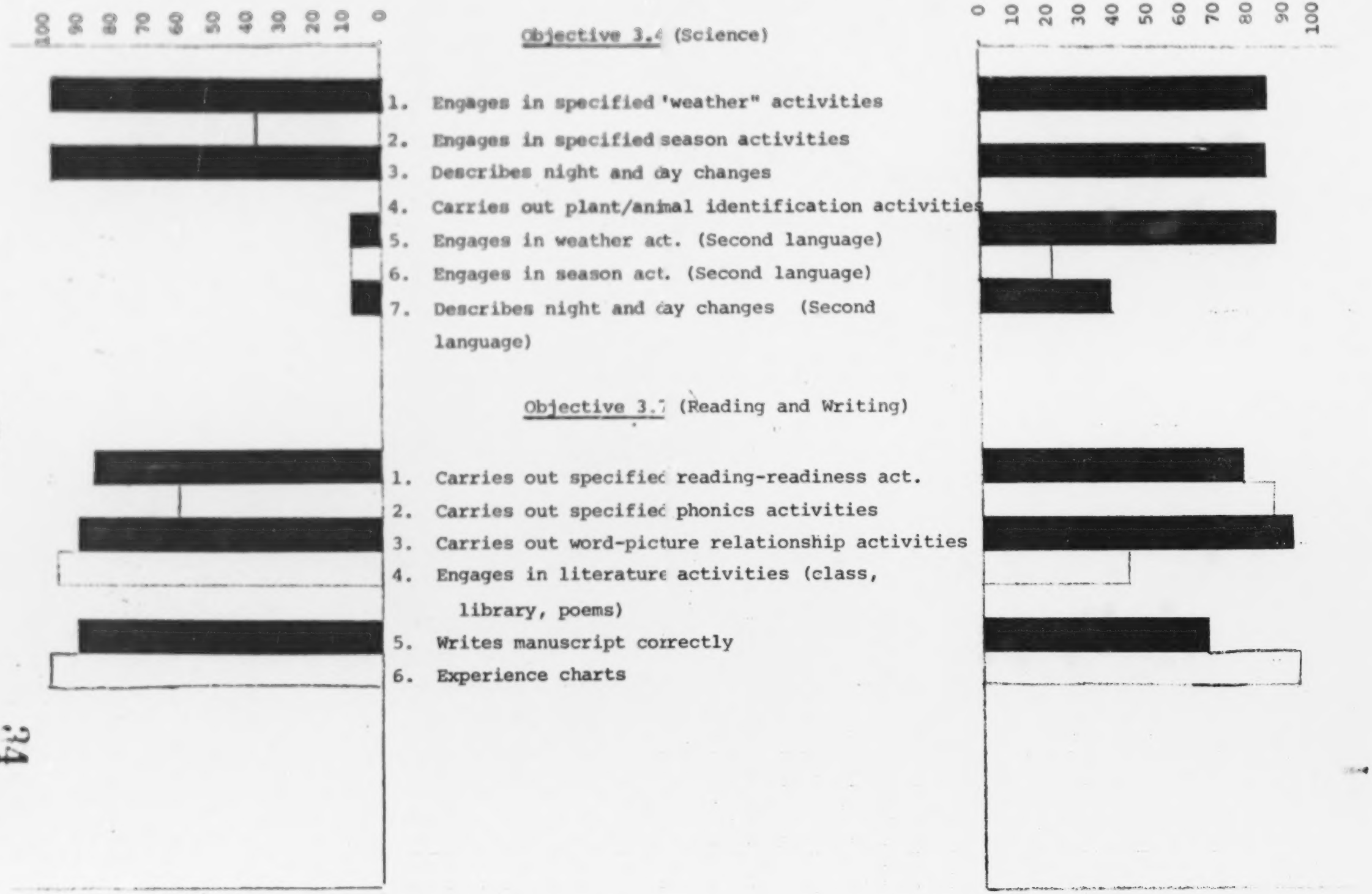

PERCENT ANGLOS COMPLETING MICRO-OBJECTIVE
100 90 80 70 60 50 40 30 20 10 0
PERCENT LATINOS COMPLETING MICRO-OBJECTIVE
0 10 20 30 40 50 60 70 80 90 100
Objective 3.4 (Science)
1. Engages in specified 'weather" activities
2. Engages in specified season activities
3. Describes night and day changes
4. Carries out plant/animal identification activities
5. Engages in weather act. (Second language)
6. Engages in season act. (Second language)
7. Describes night and day changes (Second language)
Objective 3.7 (Reading and Writing)
1. Carries out specified reading-readiness act.
2. Carries out specified phonics activities
3. Carries out word-picture relationship activities
4. Engages in literature activities (class, library, poems)
5. Writes manuscript correctly
6. Experience charts

FIGURE 2.3. PERCENT OF FIRST GRADE THAT TEACHERS OBSERVED CORRECTLY PERFORMING MICRO-OBJECTIVE (Part C)

STUDY 2A. ORAL COMMUNICATION IN THE FIRST LANGUAGE AND SECOND LANGUAGE IN THE MODEL SCHOOL BILINGUAL PROGRAM

Introduction

Rationale

The Model School program began in the 1969-1970 school year with prekindergarten, kindergarten, and first-grade experimental classes. At these grade levels it was felt that considerable time and effort should be spent in furthering the development of oral language skills in the mother tongue as well as introducing the second language. (In addition to this oral emphasis, work with written materials is also included in the first-grade program; see Study 7.)

Both first- and second-language oral skills were deemed central enough by the program director and her staff to warrant redundancy of measures. They have been assessed using the teacher log and using specially devised speaking tests. This study presents findings using the speaking tests.

Objectives

The speaking tests were designed to assess the students' performance on samples of skills specified in the first- and second-language objectives. The objectives, edited to include only the portions relevant to this study, are as follows:

1. Performance Objective 1.1: Growth of Communication Skills in the Students' First Language (English or Spanish) in the Prekindergarten Program.

Students enrolled in the prekindergarten program will be able to carry out activities specified in the prekindergarten program guide under the following categories in their first language:

A. Self-identification using sentences
C. Identification of family members.

2. Performance Objective 1.2: Growth of Communication Skills in the Students' Second Language (Spanish or English) in the Prekindergarten Program.

Students enrolled in the prekindergarten program will be able to carry out activities specified in the following categories in the prekindergarten program guide in their second language:

A. Self-identification using sentences
C. Identification of family members.

3. Performance Objective 2.1: Growth of Communication Skills in the Students' First Language (English or Spanish) in the Kindergarten Program.

Students enrolled in the kindergarten program will be able to carry out activities specified in the following categories in the kindergarten program guide in their first language:

A. Self-identification in sentences
C. Identification of family members.

4. Performance Objective 2.2: Growth of Communication Skills in the Second Language (Spanish or English) in the Kindergarten Program.

Students enrolled in the kindergarten program will be able to carry out activities specified in the following categories in the kindergarten program in their second language:

A. Self-identification in sentences
C. Identification of family members.

5. Performance Objective 3.1: Growth of Communication Skills in the First Language (English or Spanish) in the First Grade Program.

Students enrolled in the first-grade program will be able to carry out activities specified in the following categories in the first-grade program guide in their first language:

A. Self-identification using sentences
C. Identification of family members.

6. Performance Objective 3.2: Growth of Communication Skills in the Second Language (Spanish or English) in the First Grade Program.

Students enrolled in the first-grade program will be able to carry out activities specified in the following categories of the first-grade program guide in their second language:

A. Self-identification using sentences
C. Identification of family members.

Procedures

Program Description

In experimental classes at the Model School the verbal skills specified in all communication-skills objectives were taught in the first and second languages using the oral-aural approach--using question and answer methods, teacher-devised games, songs, stories, trips, etc. Teachers were generally free to develop the specific lesson plans themselves, but they were guided in this process by regular meetings with program supervisors. Both the first- and second-language skills were taught by the teacher on the team who is a native speaker of that language. As all teachers are bilingual at least to the point of speaking both languages, communication by all teachers with students in their mother tongue was possible.

In control classes, at the Moffet School, teachers were all monolingual English-speakers. They taught their classes in the regular manner, following the usual curriculum for their grade level.

Evaluation

Limited resources for evaluation resulted in modification of this evaluation from the originally proposed design to a post-only study. This change has resulted in sacrificing some confidence in the findings. As students in experimental and control classes attended separate schools, there is some possibility that observed differences existed before the beginning of both the regular and experimental programs. (The original plan would have used gain scores, and thus would be less vulnerable to this kind of problem.) The original plan also had provision for several raters to score each student's response without knowing the group (experimental or control) to which he belonged, thus getting a rater-reliability estimate for the test and avoiding prejudiced ratings. It should be noted, however, that the tape recordings of the pretest are still available, and analysis at a later date is still a possibility.

Instruments. The speaking test used was an adaptation of an instrument for testing the English-speaking skills of foreign students. The major changes in it were (a) construction of a Spanish version, used to assess speaking skills in that language, and (b) development of English-Spanish bilingual instructions. The test consisted of three parts, Repetition, Questions, and Free Response. Development of each of these parts and the scoring criteria for each was shown in detail in the Revised Model School Proposal, pp. 72-74. The test script and scoring sheet are shown appended to this paper.

In the first part, Repetition, students were asked to repeat eight words containing phonemes which are difficult for non-native speakers to pronounce. They are judged on a four-point scale--0- not comprehensible, 1 - heavy accent, 2 - light accent, 3 - standard native speaker. In the second portion, Questions, the pupils had to answer five questions: What is your name? Where do you live? How old are you? How many brothers and sisters do you have? What days of the week do you go to school? One question is specifically related to a prekindergarten micro-objective, two are related to kindergarten micro-objectives, and four are related to first-grade micro-objectives. The last item, What days do you go to school?, was not specified in any objective, but it was felt that there was a good chance that children would learn this coincidentally with attending the program. These same questions were asked in both the English and Spanish versions. Students were instructed to respond in the same language as that of the test. This portion of the test was scored on a four-point scale in which 0 indicated no response, 1 indicated an inappropriate response (i.e., an obviously incorrect answer to the question asked), 2 indicated a minimal (1- or 2- word) correct response, and 3 indicated a more expansive correct response.

The last part of the test, Free Response, asked children to tell what they saw in a picture. The picture was a family scene which contained six items mentioned in the prekindergarten curriculum guide, eight items appearing in the kindergarten guide, and ten items in the first-grade guide. The student had to name as many objects as he could in the language being tested. The number of items named was the score for this part of the test (with 10 or more being scored as 10). If the student gave an integrated response in which the whole scene was described as a unit (e.g. "A family relaxing") he received a score of 11, without regard for the number of pictured items he had identified.

In parts 2 and 3 of the test, all items related to the objectives were specified as both first- and second-language goals. Therefore, it was felt that the same English and Spanish tests could be used for both language groups in their first and second languages.

Sample. Five Anglo (children of English-speaking parents) and five Latino (born in a Spanish-speaking area or living in a household where Spanish is the dominant language) students from each class (experimental and control) provided a random sample of students of each ethnic group for fall testing. Subsamples of three were chosen from these groups of five for retest at the end of the year so that, should resources be available, reanalysis of the data using a pretest-posttest design would be possible. If one of the three students selected was absent or otherwise not available, one of the two remaining was substituted.

In one control class, only one of the five Latinos was available for retest, and in a second control class only two Latinos were available for retest. As the analysis of this data used class sample means, for these classes the mean used in the analysis was based on this reduced number of cases. Students were sampled from each of the two prekindergartens, four kindergartens, and four first grades at the control school.

Procedure. The original proposal stated that samples of the skills in each of these areas would be sampled on a speaking test in which a tape-recorded native speaker of the language being examined would ask the student (a) to repeat words, (b) to answer questions, and (c) to describe a picture. The end-of-year performance of students was to be compared against two baselines: the performance of the same students at the beginning of the school year and the performance of a control group at the beginning and the end of the school year. The performance of the children was to be tape-recorded and a panel of three judges was to rate performance on each of the three parts of the test without knowing the grade level, the ethnic group, or the participation (experimental or control) of the students.

In accordance with this design, pretests were administered to samples of five students each collected from all the classes in the Potter-Thomas Bilingual School program and the equivalent grades at the Moffet School, which serves a group of students of similar ethnic composition and socioeconomic status. However, the tape recording procedure, with the tests to be analyzed at a later date, proved to be unworkable. Using the tape recorder to make a permanent record of the student's performance expanded the time necessary to examine each child to nearly one half-hour.

The quality of recordings made was very variable. It was quite difficult to understand and evaluate the performance of many children. As a result, the tape-recording of children for the later evaluation had to be abandoned in favor of a procedure moreconsistent with the resources available for project evaluation, and which avoided the technical complications of taping.

To this end, in the posttest the procedure was modified considerably, and a posttest-only data analysis was carried out. It should be noted, however, that the tape recording of the pretest has been preserved, and reanalysis using this data will be carried out if resources become available to do so at a later date.

In the posttest, students were tested during the first weeks of June, 1970, by the two program supervisors of the Potter-Thomas School program. Students were made to feel comfortable and were shown how the tape recorder worked. The tape recorder playing the test, which contains its own instructions, was then played, and the supervisor checked to see that the students understood the instructions. All heard these instructions in both English and Spanish. The tape recorder was then turned on for students to respond to the items. As the student performed each item, the tester recorded the score on a mimeographed sheet provided for that purpose. All students were tested in their mother tongue first, then in their second language.

Data Analysis. The data for the kindergarten and first-grade classes were analyzed using analysis of variance with the mean of the sample drawn from each class as the observational unit. While the procedure has the effect of sharply reducing the number of cases, relatively little power is lost, and violation of the ANOVA assumption of independence of observations is avoided (See P. Peckham, G. Glass, and K. Hopkins, The Experimental Unit in Statistical Analysis, in Journal of Special Education, Vol. 3 (1969), No. 4).

Six separate analyses were performed, one for each of the three parts of the two tests.

Findings for the prekindergarten program are also presented but not included in the data analyses, because there was no appropriate control group available.

Results

Performance Objectives 2.1, 3.1 (First language in kindergarten and first grade). Table 2 A.1 shows the findings for the Repetition part (Part 1) of the speaking test in the students' first language. It can be seen that there were no significant differences; the test failed to discriminate between kindergartners and first graders, and between experimental and control students. The strongest difference observed is between Anglos and Latinos; this approaches significance ($p < .08$). As the English and Spanish tests differ, the difference is as likely to reside in the instrument as it is in the level of student performance.

Attention should be drawn to the fact that all the scores on the Repetition part of the test, as reflected by the group means, are very close or equal to the perfect score of 24. This suggests that the level of repetition skills measured by the test may be too easy for ascertaining how well a given student can hear and mimic sounds in his mother tongue.

Table 2 A.2 shows the findings for the second part of the speaking test, Questions. There were two highly significant findings--an ethnic group difference, and an experimental-control difference. The ethnic group difference ($F=9.04$, $df=1/18$, $p < .01$) indicates that in three of the four groups (Experimental kindergarten, Experimental first grade, Control first grade) Anglos scored higher than their Latino counterparts. As the English and Spanish versions of the test were direct translations of each other, one might suspect that such differences would reflect true differences in the levels of skill exhibited. While this might be true, an alternate explanation is possible--that in translation from English to Spanish the items became more difficult. It is not possible to distinguish between these two alternatives at the present time.

More important than the Anglo-Latino difference is the finding that there were clear-cut differences between experimental and control groups ($F=6.62$ $df=1/18$ $p < .02$). These differences were similar across grade level and ethnic group, with each ethnic-group-grade-level mean higher in the experimental than in the control condition.

It is noteworthy that there are no significant grade-level differences. This suggests that this part of the test is relatively insensitive to the differences in the extent to which specific micro-objectives could be related to the items in it.

Examination of the raw data is also interesting. In general the results seem to show that most students emitted only "minimal correct" responses (scored 2) in questions where they responded at all, and that few students could answer the question "What days do you go to school?" These trends were similar in all the classes.

The results for Part 3 of the test, Free Response, in the mother tongue are shown in Table 2 A.3. Two significant differences were found for this: treatment group and grade level. The treatment differences, while strong ($F=4.34$, $df=1/18$, $p < .05$), were not as uniform as those observed for the Questions part of the test, with three of the four types of students (kindergarten Anglos, kindergarten Latinos, and first-grade Latinos) scoring higher than their control-group counterparts, but first-grade Anglos scoring slightly better in control classes than in experimental classes.

The second significant difference, grade level ($F=6.89$, $df=1/18$, $p<.02$), is interesting because the direction obtained is opposite from that expected. In all conditions except control Anglo, the kindergarten students scored higher than the first grade. Examination of the cell mean suggests an explanation for the finding. In the three superior kindergarten cells, the mean is higher than 10, which means that substantial numbers of these students gave integrated responses rather than a list of items. One wonders whether this reflects an emphasis on the part of kindergarten teachers in having their students make holistic complete-sentence responses rather than describe situations using lists--an emphasis not made by most first-grade teachers.

The absence of significant differences in the performance of Anglos and Latinos suggests that this part of the test was equally difficult for both groups. The absence of significant interactions suggests that the reversal already noted is probably a chance phenomenon.

Performance Objectives 2.2, 3.2 (Second language in kindergarten and first grade). Table 2 A.4 contains the results for the performance of experimental and control students on the Repetition portion of the speaking test. Three F tests were significant: ethnic group, experimental condition, and the interaction of these two variables. Examination of the means table shows that, in every cell-pair, Anglo students scored lower when pronouncing words in the Spanish language than Latinos did in pronouncing English ($F=46.2$, $df=1/18$, $p<.001$). As was noted earlier, in the paradigm used, distinctions between test-form and student-performance differences must be made cautiously. However, when students were tested in their native tongue, the English pronunciation portion of the test seemed more difficult; now, when students were tested in their second language, it is the Spanish pronunciation test which appears the more difficult. This reversal suggests that in reality, Latino students have learned to hear and make the sounds of the English language better than the Anglos have learned to hear and make the sounds of Spanish. This, of course, is credible, because the Latino students live in an English-speaking culture.

A strong relationship ($F=27.0$, $df=1/18$, $p<.001$) was also found between experimental and control classes. As can be seen from the cell means in the table, it is true that the student's skill was enhanced by participation in the Model School program regardless of his background or grade. However, this enhancement was not uniform. The interaction between ethnic group and experimental condition ($F=13.1$, $df=1/18$, $p<.002$) indicates that the ability to hear and imitate sounds in the second language was greatly enhanced by the program for Anglos, but resulted in only small gains in Latinos. This appears to be due to the reasonably high scores earned by Latinos in the control condition.

There were no significant differences for the grade level and its interactions with the other variables.

The findings for the second part of the second-language test, Questions, are shown in Table 2A.5. As can be seen, there are two main effects, ethnic group and experimental condition, which are clearly significant, and one interaction, the one between these two variables, which is a borderline ($p<.10$). As with the second-language repetition, Latinos were superior to Anglos in performance in both grade levels and both experimental conditions ($F=65.79$, $df=1/18$, $p<.001$).

The trend for experimental group differences is quite strong ($F=8.63$, $df=1/18$, $p<.01$), with all but one of the cell means higher among experimental than among the corresponding cells for controls; the only exception was first-grade Latinos, where they were the same (both 7.7). Attention should be drawn to the performance of the Anglo students. The findings suggest that Anglo students in the program developed only a fairly low level of skills, by making "minimum responses", which are scored on one or two items. Virtually none of the Anglo control students made any attempt to answer any questions, despite their having native Spanish-speakers in their classes. For Latino students the pattern was quite different, with both experimental and control students exhibiting a wide range of competencies, but experimental kindergartners having an edge over kindergarten controls.

Results for Part 3 of the second-language test, Free Response, are shown in Table 2A.6. As can be seen, there were sharp differences between Anglo and Latino students ($F=171.0$, $df=1/18$, $p<.001$), and little else. All four Latino means were respectably close to the upper limit of eleven, with the experimental scores intermediate between the control kindergarten and the control first grade, which had the lowest and highest scores respectively. Among the Anglos, the scores were close to zero, with the typical experimental student able to name only one object in the picture, but no control student able to name a single item.

Prekindergarten Scores

Performance Objective 1.1 (First language). As shown in Table 2A.7, the scoring pattern for the prekindergarten experimental classes was remarkably similar to that of the first-grade and kindergarten experimental classes, but usually slightly lower. The Repetition scores in the mother tongue for Anglos and Latinos were 21.3 and 20.3 respectively, which is slightly below the 23.6 and the 24.0 scored by the experimental Anglo and Latino students in the other two grades.

The scores obtained on Part 2, Questions, were similarly a bit lower than those obtained for the kindergarten and first grade. The Anglos scored 8.3 compared with an average of 10.6 for the two higher grades, and the Latinos scored 7.0 compared with 8.5 for Latinos in the two higher grades.

The scores obtained by prekindergarten students on the Free Response portion of the test were similar to those of the students in

the upper grades. The score of 9.2 obtained by Anglos is less than one point lower than the average for the kindergartners and first graders--9.8. The score of 7.7 obtained by the prekindergarten Latinos is a bit lower than the score obtained by the kindergarten and first-grade experimental Latinos, which is 10.0.

Performance Objective 1.2 (Second language). The similarity of performance of prekindergartners to the other grade levels was not so well maintained in the second-language testing. In part 1, Repetition, the Anglo prekindergarten mean was 21.0, which was substantially better than that obtained in the upper two grades, which averaged 15.1. On the other hand, the Latino prekindergartners were poorer than students in the upper grades, with an average of 16.5 compared with 19.3 for the older students.

Performance of prekindergartners on Part 2, Questions, in the second language was similar to that found in the upper two grades, Anglo prekindergartners scoring 3.5 as compared to a mean of 3.6 for kindergartners and first graders, and Latino prekindergartners scoring 7.3 compared with 8.5 for the older children.

Performance of prekindergartners on Part 3, Free Response, in the second language suggests that in the second language clear differences might exist between prekindergartners and older children. The Anglos scored 0.8, which was only a bit more than half the score obtained by the older Anglos, who averaged 1.4. Latino prekindergartners, while performing better than Anglos, still showed a sharp distinction between prekindergarten and the upper two grades. The sample averaged 5.3, compared with 8.7 for the older children.

Conclusions

Within the limits posed by the design of this study, the following conclusions seem to be warranted with regard to performance of students in their mother tongue:

(1) The repetition (pronunciation) portion of the test does not discriminate between experimental and control students, suggesting that participation in the program has neither enhanced nor depreciated this first-language skill in students, at least within the range measured by the test. If there are differences, they are more subtle than those anticipated by the test developers.

(2) All students' ability to answer simple questions and describe a picture in their mother tongue was enhanced by the program. This clear-cut finding is important because it shows that the program contains not only benefits to Latino students in developing their skills in speaking their mother tongue, but also, no doubt because of highly specific objectives, improved planning, and consistent supervision of enhanced performance of Anglos.

With regard to second-language performance, the following conclusions seem clear:

(1) The Latinos evidence more second-language skills than do the Anglos.

This is not unanticipated, in that Latinos are immersed in an English-speaking environment whereas Anglos have only limited second-language experience.

(2) The program enhanced all students' ability to (a) pronounce the sounds peculiar to their second language and (b) answer simple ques- which appear in the specific material. The failure of the free response portion of the test seems to be due primarily to the fact that among Latinos performance was independent of program participation, whereas among Anglos, the trend in favor of participants was only a weak one.

Taken together, the findings suggest that in terms of cognitive use of the second language, experimental students have begun to gain mastery in the situation where performance is more rote than free.

One surprising feature is the failure of the test to discriminate clearly between kindergarten and first grade as expected, with the latter's performance in one occasion clearly the poorer. Perhaps, in first grade these speaking skills receive less emphasis than in the kindergarten, and this overpowers the increased content-validity of the test for this grade. This suggests that reexamination of the test on an item-by-item basis in each language may be warranted to clarify which learnings were acquired in each grade level. It should, however, be noted that the performance of the prekindergartners was about what one would expect, relative to the other two grades, except for the Anglo second-language repetition (pronunciation) score, which was superior to that of all other second-language groups, perhaps because of a special emphasis on these skills on the part of the teachers of the Anglo prekindergartners. Follow-up here seems warranted to find out whether special methods which could be copied by other teachers were used in those classes.

TABLE 2A.1

ANALYSIS OF VARIANCE, SPEAKING TEST, REPETITION, MOTHER TONGUE (PART 1)

Table of Means

Condition	Grade	Ethnic Group-Language	
		Anglo in English	Latino in Spanish
Experimental			
Kindergarten	(N=4 classes)	23.5	24.0
First Grade	(N=4 classes)	23.7	24.0
Control			
Kindergarten	(N=2 classes)	21.5	24.0
First Grade	(N=3 classes)	24.0	24.0

Analysis

Variable(s)	F	df	p<
Ethnic Group	3.55	1/18	(.08)
Experimental Condition	0.76	1/18	NS
Grade	2.34	1/18	NS
Experimental Cond. x Ethnic Group	0.76	1/18	NS
Ethnic Group x Grade	2.34	1/18	NS
Experimental Cond. x Grade	2.84	1/18	NS
Exper. Cond. x Grade x Ethnic group	2.84	1/18	NS

( ) = approaching significance, p<.10; * = significant , p<.05;
** = significant, P<.01.

TABLE 2A.2

ANALYSIS OF VARIANCE, SPEAKING TEST, QUESTIONS, MOTHER TONGUE (PART 2)

Table of Means

Condition	Grade	Ethnic Group-Language: Anglo in English	Latino in Spanish
Experimental			
Kindergarten	(N=4 classes)	11.1	8.7
First Grade	(N=4 classes)	10.0	8.2
Control			
Kindergarten	(N=2 classes)	7.4	8.1
First Grade	(N=3 classes)	9.1	7.4

Analysis

Variable(s)	F	df	p<
Ethnic Group	9.0	1/18	.01**
Experimental Condition	6.6	1/18	.02*
Grade	0.3	1/18	NS
Experimental Cond. x Ethnic Group	1.5	1/18	NS
Ethnic Group x Grade	0.3	1/18	NS
Experimental Cond. x Grade	1.5	1/18	NS
Experimental Cond. x Ethnic Group x Grade	1.9	1/18	NS

( ) = approaching significance, p<.10; * = significant, p<.05; ** = significant, p<.01.

TABLE 2A.3

ANALYSIS OF VARIANCE, SPEAKING TEST, FREE RESPONSE, MOTHER TONGUE (PART 3)

Table of Means

Condition	Grade	Ethnic Group-Language: Anglo in English	Latino in Spanish
Experimental			
Kindergarten	(N=4 classes)	10.2	10.5
First Grade	(N=4 classes)	9.4	9.5
Control			
Kindergarten	(N=2 classes)	9.5	10.1
First Grade	(N=3 classes)	9.7	7.4

Analysis

Variable(s)	F	df	p<
Ethnic Group	0.8	1,18	NS
Experimental Condition	4.3	1/18	.05*
Grade	6.9	1/18	.02*
Experimental Cond. x Ethnic Group	2.9	1/18	NS
Ethnic Group x Grade	2.4	1/18	NS
Experimental Condition x Grade	0.1	1/18	NS
Ethnic Group x Experimental Cond. x Grade	3.0	1/18	(.10)

( ) = approaching significance, p<.10; * = significant, p<.05; ** = significant, p<.01.

TABLE 2A.4

ANALYSIS OF VARIANCE, SPEAKING TEST, REPETITION, SECOND LANGUAGE (PART 1)

Table of Means

Condition	Grade	Ethnic Group-Language: Anglo in Spanish	Ethnic Group-Language: Latino in English
Experimental			
Kindergarten	(N=4 classes)	17.4	19.3
First Grade	(N=4 classes)	12.8	19.3
Control			
Kindergarten	(N=2 classes)	6.2	17.0
First Grade	(N=3 classes)	5.1	18.0

Analysis

Variable(s)	F	df	p<
Ethnic Group	46.2	1/18	.001**
Experimental Condition	27.0	1/18	.001**
Grade	1.8	1/18	NS
Experimental Cond. x Ethnic Group	13.1	1/18	.002**
Ethnic Group x Grade	2.9	1/18	NS
Experimental Cond. x Grade	1.0	1/18	NS
Experimental Cond. x Ethnic Group x Grade	0.3	1/18	NS

( ) = approaching significance, $p<.10$; * = significant, $p<.05$; ** = significant, $p<.01$.

TABLE 2A.5

ANALYSIS OF VARIANCE, SPEAKING TEST, QUESTIONS, SECOND LANGUAGE (PART 2)

Table of Means

Condition	Grade	Ethnic Group-Language	
		Anglo in Spanish	Latino in English
Experimental			
Kindergarten	(N=4 classes)	3.7	9.3
First Grade	(N=4 classes)	3.5	7.7
Control			
Kindergarten	(N=2 classes)	0.0	7.5
First Grade	(N=3 classes)	0.1	7.7

Analysis

Variable(s)	F	df	p<
Ethnic Group	65.8	1/18	.001**
Experimental Condition	8.6	1/18	.01**
Grade	0.5	1/18	NS
Ethnic Group x Experimental Cond.	3.0	1/18	(.10)
Ethnic Group x Grade	0.4	1/18	NS
Experimental Cond. x Grade	0.5	1/18	NS
Experimental Cond. x Grade x Ethnic Group	0.3	1/18	NS

( ) = approaching significance, p<.10; * = significant, p<.05; ** = significant, p<.01.

TABLE 2A.6

ANALYSIS OF VARIANCE, SPEAKING TEST, FREE RESPONSE, SECOND LANGUAGE (PART 3)

Table of Means

Condition	Grade	Ethnic Group-Language	
		Anglo in Spanish	Latino in English
Experimental			
Kindergarten	(N=4 classes)	1.0	9.0
First Grade	(N=4 classes)	1.1	8.4
Control			
Kindergarten	(N=2 classes)	0.0	7.5
First Grade	(N=3 classes)	0.0	9.5

Analysis

Variable(s)	F	df	p<
Ethnic Group	171.0	1/18	.001**
Experimental Condition	0.7	1/18	NS
Grade	0.1	1/18	NS
Ethnic Group x Experimental Cond.	0.6	1/18	NS
Ethnic Group x Grade	0.1	1/18	NS
Experimental Condition x Grade	1.0	1/18	NS
Experimental Cond. x Ethnic Group x Grade	1.8	1/18	NS

( ) = approaching significance, p<.10; * = significant, p<.05;
** = significant, p<.01.

TABLE 2A.7

MEAN SCORES ON FIRST AND SECOND LANGUAGE SPEAKING TEST OF A SAMPLE OF EXPERIMENTAL KINDERGARTEN PUPILS

Parts of Test	Anglo (N=6 pupils)		Latino (N=6 pupils)	
	First Language	Second Language	First Language	Second Language
Pronunciation*	21.3	21.0	20.3	16.5
Questions	8.3	3.5	7.0	7.3
Free Response	9.2	0.8	7.7	5.3

*Repetition

Appendix 2A.1

SPEAKING TEST IN SPANISH

VERSION SL: Spanish Content

Hello. We are going to play a game. You will hear some Spanish words. I want you to say the words after you hear them.

¡Hola! Hoy vamos a jugar un juego. Vas a oir algunas palabras en español. Yo quiero que digas esas palabras, despues de oirlas.

Let's begin:

Vamos a empezar: (Bell 10 seconds after each word)

buenos días
oso feo
mercado
perro
un año
calle
azúcar
lección

Now I am going to ask you some questions. Answer them in Spanish.

Ahora, voy a hacerte algunas preguntas. Contéstame en español. (Bell after 20 seconds)

¿Cómo te llamas?
¿Dónde vives?
¿Cuántos años tienes?
¿Cuántos hermanos y hermanas tienes?
¿Qué días vienes a la escuela?

The teacher has just given you a picture.
Tell me what you see in the picture. Tell me in Spanish.

La maestra acaba de darte un cuadro. Dime lo que ves en el cuadro. Dime en español.

1 minute

Bell.

Appendix 2A.2

SPEAKING TEST IN ENGLISH

VERSION EL: English Content

¡Hola! Hoy vamos a jugar un juego. Vas a oir algunas palabras en inglés.
Yo quiero que digas esas palabras, despues de oirlas.

Hello. Today we are going to play a game. You will hear some English words.
I want you to say the words after you hear them.

Vamos a empezar:

Let's begin: (Bell 10 seconds after each word)

ladder
think
cut
ship
that's right
this is a pretty hat
he bought a boat
the zoo is closed.

Ahora, voy a hacerte algunas preguntas. Contéstame en inglés.

Now I am going to ask you some questions. Answer them in English.
(Bell 20 seconds after each question)

What is your name?
Where do you live?
How old are you?
How many brothers and sisters do you have?
On what days do you go to school?

La maestra acaba de darte un cuadro.
Dime lo que ves en el cuadro.
Dime en inglés.

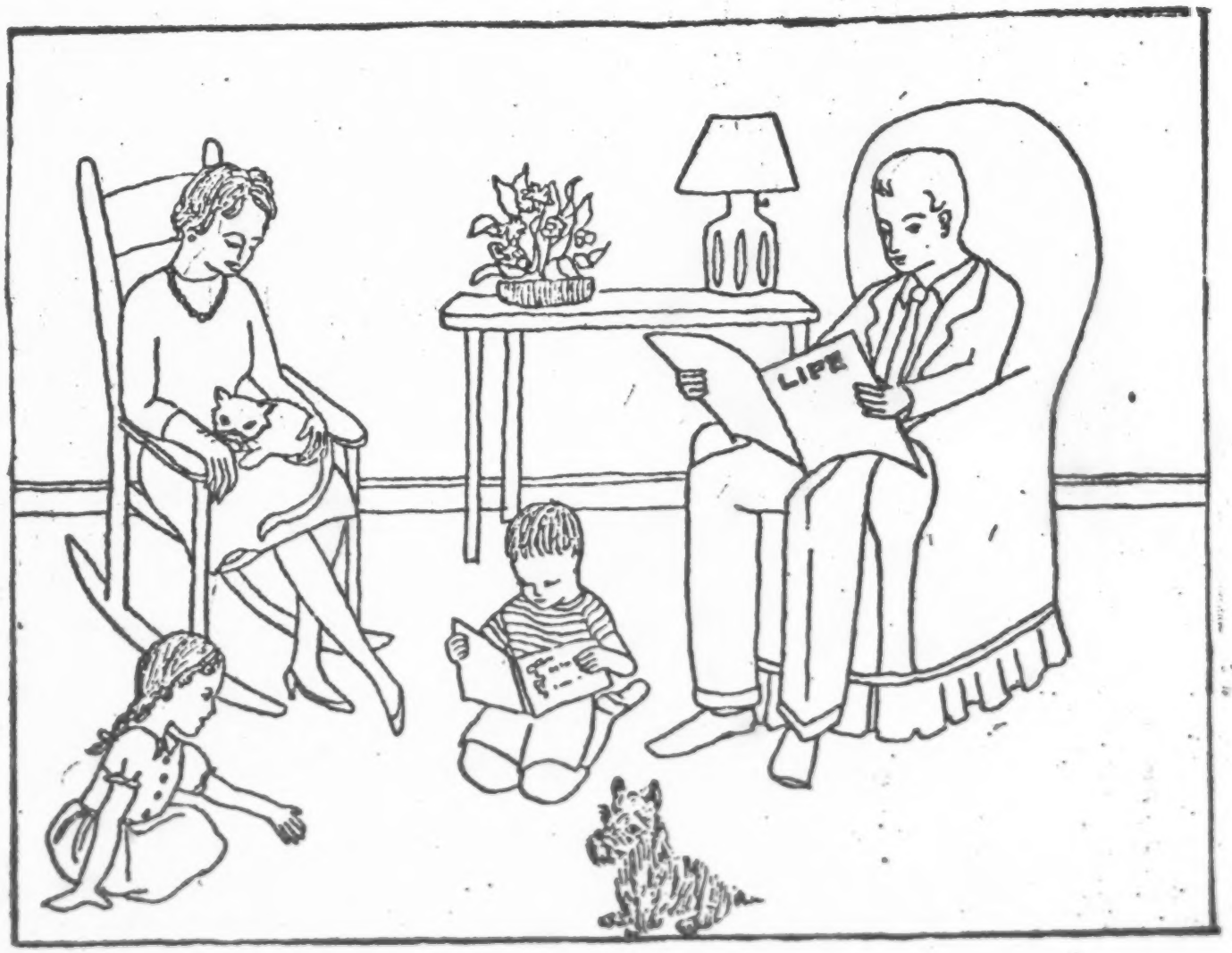
The teacher just gave you a picture.
Tell me what you see in the picture.
Tell me in English.

1 mimute

Bell.

Appendix 2A.3

PICTURE USED IN SPEAKING TEST



Appendix 2A.4

SCORING METHOD FOR THE S.S.L. SPEAKING TEST BILINGUAL SCHOOL; PRE-KINDERGARTEN; KINDERGARTEN; FIRST GRADE

PART I REPETITION

Check the appropriate column as you listen to the child pronounce each word.

0. NOT COMPREHENSIBLE. A native speaker of Spanish would not recognize the word(s) or other word(s) were substituted, or no attempt at imitation.

1. HEAVY ACCENT. The words are understandable, but the student has substituted sounds common in his native language for sounds characteristic of Spanish. Be especially aware of the letters underlined on the scoring sheet.

2. LIGHT ACCENT. The word is pronounced correctly except that intonation is not characteristic of Spanish.

3. STANDARD. The word pronounced as a native speaker of Spanish would (allowing for regional differences).

PART II QUESTIONS

For each item, check the appropriate score:

0. NO RESPONSE.

1. INAPPROPRIATE RESPONSE. The student failed to respond in Spanish, or the response was not an answer to the question asked.

2. MINIMAL RESPONSE. Student answered with only one or two words. For item 5, score it in this category if only one, two or three days of the week are included, or Sabado and Domingo are included.

3. EXPANSIVE RESPONSE. Student answered with a phrase, clause, or complete sentence (except item 3). Minimums for an "Expansive Response" for each test item in this part are:

Item 1 - "Me llamo_____."
Item 2 - "Yo vivo en_____."
Item 3 - "Yo tengo_____." Note - If student uses the verb "ser" or "estar" in place of "tener score it as 2.
Item 4 - An appropriate complete sentence.
Item 5 - Four or five correct days.

PART III SPANISH

Check the number of items the child listed (if over 10, check 10). If the child gave an integrated description, such as "A family relaxing," or "Two parents and two children with their pets in the living room." Check integrated response on the scoring sheet.

Appendix 2A.5

SCORING METHOD FOR THE E.S.L. SPEAKING TEST BILINGUAL SCHOOL; PRE-KINDERGARTEN; KINDERGARTEN; FIRST GRADE

PART 1 REPETITION

Check the appropriate column as you listen to the child pronounce each word.

0. NOT COMPREHENSIBLE. A native speaker of English would not recognize the word(s) or other word(s) were substituted, or no attempt at imitation.

1. HEAVY ACCENT. The words understandable but the student has substituted sounds common in his native language for sounds characteristic of English. Be especially aware of letters underlined on the scoring sheet.

2. LIGHT ACCENT. The word is pronounced correctly, except that intonation is not characteristic of English.

3. STANDARD. The word is pronounced as a native speaker of English would (allowing for regional differences).

PART II QUESTIONS

For each item, check the appropriate score:

0. NO RESPONSE.

1. INAPPROPRIATE RESPONSE. The student failed to respond in English, or the response was not an answer to the question asked.

2. MINIMAL RESPONSE. Student answered with only one or two words. For item 5, score it in this category if only one, two or three days of the week are given, or Saturday and Sunday are included.

3. EXPANSIVE RESPONSE. Student answered with a phrase, clause, or complete sentence (except item 5). Minimums for an "Expansive Response" for each test item in this part are:

Item 1 - "My name is_____" or "It's_____."
Item 2 - "I live at (in)_____" or an address including at least one of the following combinations - house numbers and street, street and city.
Item 3 - "I am_____." NOTE if student says "I have _____years" score it as 2.
Item 4 - An appropriate complete sentence.
Item 5 - Four or five correct days.

PART III ENGLISH

Check the number of items the child listed (if over 10, check 10). If the child gave an integrated description, such as "A family relaxing," or "Two parents and two children with their pets in the living room." Check integrated response on the scoring sheet.

Appendix 2A.6

SCORING SHEET, SPANISH SPEAKING TEST, BILINGUAL SCHOOL
PRE-KINDERGARTEN; KINDERGARTEN; AND FIRST GRADE

Student Name _____

Age _____ Date of Test _____

PART I REPETITION	0 incomprehensible	1 heavy accent	2 light accent	3 native speaker
1. buenos dias				
2. oso feo				
3. mercado				
4. perro				
5. un ano				
6. calle				
7. azucar				
8. leccion				

PART II QUESTIONS	0 no response	1 inappropriate response	2 minimum response	3 expansive response
1. Como se llama?				
2. Donde vives?				
3. Cuantos anos tienes?				
4. Cuantos hermanos y hermanas tienes?				
5. Que dias vienes a la escuela?				

PART III SPANISH

The number of items mentioned was:

_____1 _____6 _____An integrated response was given.
_____2 _____7
_____3 _____8
_____4 _____9
_____5 _____10 or more

Appendix 2A.7

SCORING SHEET E.S.L. SPEAKING TAPE, BILINGUAL SCHOOL

PRE-KINDERGARTEN; KINDERGARTEN; FIRST GRADE

Student Name _____

Age _____ Date of Test _____

PART I REPETITION	0 incomprehensible	1 heavy accent	2 light accent	3 native speaker
1. ladder				
2. think				
3. cut				
4. chip				
5. that's right				
6. this is a pretty hat				
7. he bought a boat				
8. the zoo is closed				

PART II QUESTIONS	0 no response	1 inappropriate response	2 minimum response	3 expansive response
1. What is your name?				
2. Where do you live?				
3. How old are you?				
4. How many brothers/sisters?				
5. On what days do you go to school?				

PART III PICTURES

The number of items mentioned was

_____ 1
_____ 2
_____ 3
_____ 4
_____ 5
_____ 6
_____ 7
_____ 8
_____ 9
_____ 10 or more

_____ An integrated response was given.

STUDY 3. TEACHER PERCEPTIONS OF STUDENT BEHAVIOR IN THE MODEL SCHOOL PROGRAM

Rationale

The Model School program introduces formal study of the skills in the mother tongue and in the second language in a team-teaching situation. Anglos and Latinos are taught part of the day in their mother tongue by a teacher who is a native speaker of that language, and taught part of the day in their second language, by a teacher who is a native speaker of the students' second language. In addition, there are parts of the day when Anglos and Latinos work together in mixed groups in which an activity is carried out predominantly in one of the languages.

This program was implemented in prekindergarten, kindergarten, and first-grade classes at the model school site. With children of this age, it appeared to the project planners that, on one hand, some care should be taken to see that students are not subjected to stresses which would result in maladaptive classroom behaviors, and on the other hand, that the program might reduce maladaptive behaviors which could be caused in Latino children by subjecting them to regular classes where neither their language nor their tradition is incorporated into the ongoing activities.

The team-teaching situation also implies the possibility of complex relationships in which the student is perceived as acting differently in first- and second-language situations by the teacher of his own or the other ethnic group.

This study makes a beginning at exploring the nature of student behaviors as seen by teachers in order to provide feedback to the project management which might be useful in planning programs for subsequent years.

Procedures

Program Description

The classes in the Model School program at the Potter-Thomas School were all team-taught. In the prekindergarten, classes met for a half-day, with both teachers working as a unit but dividing the children between them for different parts of the day. In the first grade, two regular-size classes met in a pod, or double room, equipped with a folding wall. Students and teachers could move back and forth in the space, merging it into one large space for joint activities and dividing it into regular classrooms.

In all three grades, students worked with the teacher who spoke their first language most of the day, the teacher who spoke their second language for a lesser part, and in ethnically mixed joint activities for a part of the day. This gave both the Anglo and the Latino teachers opportunity to become acquainted with the behavior of all the children in their classes.

For this study, comparison (control) classes consisted of the kindergarten and first-grade classes of the Moffet School, a neighborhood school serving an area similar to Potter-Thomas in both social-class and ethnic composition. Moffet offers the regular all-English kindergarten and first-grade programs with an all-Anglo staff. The kindergarten is taught by a teacher and an aide. In the other levels, one teacher leads the class.

Evaluation

Instrument. The data for this study were collected through the use of the Devereux Elementary School Behavior Rating Scale,[1] which uses teachers' ratings of pupils on eight scales of maladaptive behavior (Classroom Disturbance, Impatience, Disrespect-Defiance, External Blame, Achievement Anxiety, External Reliance, Inattentive-Withdrawn, Irrelevant Responsiveness). The instrument also provides three scales of adaptive behavior--Comprehension, Creative Initiative, and a Need for Closeness. It also includes three items which do not load any scale--the ability of the child to change from working on one task to working on another, the probability that the child will give up at a difficult task, and the speed with which he completes work.

Method. Two separate studies were carried out. The first was an examination of the differences in the behavior of students in experimental and control classrooms. In each class five Anglo students and five Latino students were rated by means of the Devereux instrument. Since the teachers in the control classrooms were Anglos and there was some possibility of cultural differences in rater response to an instrument like the Devereux Scale, the Anglo teacher in the experimental classes made the ratings for the experimental group in this study. As there was no prekindergarten control group, this study was confined to the kindergarten and first-grade levels.

The second study employed the ratings of the paired Anglo and Latino teachers who were members of the same team in the experimental program. It was designed to assess whether Anglo and Latino teachers perceived the same students differently. To carry out this study, ratings of five Anglo and five Latino students in each class, made by Latino teachers, was required, as well as the ratings made by the Anglo teachers in the first study. Ratings by Latino teachers were made on the same students as those made by their Anglo teammates.

In both studies, the ratings were made by the teachers, using the regular Devereux Elementary School Behavior Scale folders. They all were then scored in accordance with the test developer's instructions.

Subjects. It is difficult to specify the subjects in these studies because the data are ratings made by a given teacher on a given student, with both treated as variables. In the first analysis, a random sample of five Anglo and five Latino students was drawn from each experimental and control kindergarten and first grade. Ratings were made by the Anglo teacher on these students. In the second study, ratings made by

[1] G. Spivak and M. Swift. Devereux Elementary School Behavior Rating Scale. Devon, Pa.: The Devereux Foundation, 1967.

the Latino teachers in the same classes. Again, random samples of five Anglos and five Latinos from each class served as the objects of the ratings, but this time the same children were rated by the two teachers. In two pairs of teachers, one teacher failed to rate the same student as her teammate. This resulted in a class mean based on a reduced number of cases (3 or 4).

In the total study there were two experimental prekindergartens, four experimental and two control kindergartens, and four experimental and three control first grades from which the sample was drawn.

Data Analysis. As might be inferred from the above discussion, the true unit for analysis is the sample of five students of an ethnic group as rated by a teacher. As this was the case, an analysis of the data must be on that level (See P. Peckham, G. Glass, & K. Hopkins, The Experimental Unit in Statistical Analysis, in Journal of Special Education, Vol. 3 (1969), No. 4). Analyses of variance were therefore carried out on the mean scores for these groups of five students. While this form of analysis greatly reduces the degrees of freedom, the loss of power is minimal because the five-student mean is much less variable than the single student score.

For each of the two studies two such analyses of variance were carried out: one on the total of the maladaptive behavior factors, and one on the total of the adaptive behavior. This enabled one to discuss the effects of the program on the teachers' perceptions of both good and bad classes of behavior.

Results

Experimental-Control Differences as Observed by Anglo Teachers

Table 3.1 shows the results of the analysis of "maladaptive" ratings in which Anglo teachers of both experimental and control classrooms rated their students. As can be seen, there was one clear-cut difference: first-grade students were seen as exhibiting more maladaptive behaviors than were kindergartners ($F=8.2$, $df=1/9$, $p<.01$). In addition, there were weak trends for Anglos to exhibit more of these maladaptive classroom behaviors than Latinos ($p<.09$). A marginally significant interaction ($p<.07$) indicated that the tendency for Anglos to be seen as exhibiting more maladaptive behaviors was strongest in the experimental condition. No other effects or interactions approached significance.

Table 3.2 shows the results of the Anglo experimental and control teachers' ratings of their students on the "adaptive" scale. As can be seen, there were no significant differences; this fact indicates that there was no systematic relationship between teachers' estimate of the amount of adaptive behaviors exhibited by the sample of students in the classes, and any of the variables.

Perceptions of Students by Anglo and Latino Teachers

The second question investigated was the relationship between the perception of students of the two ethnic groups by teachers of the two ethnic groups. Table 3.3 shows the findings for the combined "maladaptive" scales of the Devereux instrument.

As can be seen from the table, there were no significant differences found, suggesting that experimental Anglo and Latino teachers probably do not differ in their perceptions of the levels of maladaptive behavior in their classes.

Table 3.4 shows the perceptions by the teachers of the two ethnic groups of the students of the two ethnic groups on the adaptive classroom behaviors. There is one significant difference in these data: the interaction between Teacher Ethnic Group and Student Ethnic Group. ($F=6.2$, $df=1/14$, $p<.03$). Examination of the table of means will show that both Anglo and Latino experimental teachers see more adaptive behaviors exhibited by students of their own ethnic group.

Conclusions

The analyses point up two facts: (a) that in the view of Anglo experimental and control teachers, there seems to be a trend for maladaptive behavior to increase with grade level in both experimental and control conditions, and (b) that in the view of experimental teachers, students seem to exhibit more adaptive behaviors when working with the teacher in their own ethnic group.

This latter finding may have some importance. At present there seem to be two possible explanations for it:

- The program may elicit more adaptive classroom behaviors from students in the situations where their mother tongue is spoken.

- The teachers' prejudices or stereotypes may result in their perceiving Anglo and Latino students differently, although the students' behaviors may, in fact, be the same.

There may be value in a follow-up study designed to distinguish between these alternatives. While finding that second-language classes elicit less of certain types of adaptive behavior might not be to serious, finding that teachers hold sets of expectations or stereotypes favoring members of their own ethnic group could lead to staff development programs which would improve the effectiveness of the program.

The absence of other clear-cut differences suggests that the program has not resulted in any tensions which would lead to acting-out behavior on the part of the children enrolled in it.

TABLE 3.1

RATINGS OF KINDERGARTEN AND FIRST-GRADE STUDENTS
BY ANGLO TEACHERS: MALADAPTIVE BEHAVIORS

	Student Ethnic Group	
	Anglo Students	Latino Students
Experimental		
Kindergarten (N=4 classes)	79.0	71.2
First Grade (N=4 classes)	106.5	85.9
Control		
Kindergarten (N=2 classes)	69.8	68.0
First Grade (N=3 classes)	93.1	95.9

Analysis of Variance

Variable	F	df	p<
Between Classes			
Experimental Condition	0.2	1/9	NS
Grade	8.2	1/9	.02*
Exp. Condition X Grade	0.1	1/9	NS
Within Classes			
Ethnic Group	3.4	1/9	(.09)
Ethnic Group X Exp. Condition	4.0	1/9	(.07)
Ethnic Group X Grade Level	0.3	1/9	NS
Ethnic Group X Exp. Cond. X Grade Level	1.4	1/9	NS

**=p .01, * = p<.05, ( ) = marginally significant, p<.10.

TABLE 3.2

RATINGS OF KINDERGARTEN AND FIRST-GRADE STUDENTS BY ANGLO TEACHERS: ADAPTIVE BEHAVIORS

	Ethnic Group of Students Rated	
	Anglo	Latino
Experimental		
Kindergarten (N=4 Classes)	38.3	31.2
First Grade (N=4 Classes)	38.4	36.4
Control		
Kindergarten (N=2 Classes)	30.0	33.9
First Grade (N=3 Classes)	39.1	31.1

Analysis

Variable(s)	F	df	p<
Between Classes			
Experimental			
Grade Level	0.7	1/9	NS
Exper. Cond. X Grade Level	1.2	1/9	NS
Within Classes	0.0	1/9	NS
Ethnic Group			
Ethnic Group X Exper. Cond.	2.0	1/9	NS
Ethnic Group X Grade Level	0.3	1/9	NS
Ethnic Group X Exper. Cond. X Grade Level	0.5	1/9	NS
	3.3	1/9	NS

TABLE 3.3

COMPARISON OF RATINGS, BY ANGLO AND LATINO TEACHERS IN THE EXPERIMENTAL PROGRAM, OF THE MALADAPTIVE CLASSROOM BEHAVIOR OF SAMPLES OF STUDENTS IN THEIR CLASSES

Ethnic Group of the Student		Ethnic Group of the Rater (Teacher)	
		Anglo	Latino
Anglo	Prekindergarten (N=2 Classes)	64.1	88.5
	Kindergarten (N=4 Classes)	79.0	94.5
	First Grade (N=4 Classes)	106.4	86.7
Latino	Prekindergarten (N=2 Classes)	59.0	88.9
	Kindergarten (N=4 Classes)	71.0	99.7
	First Grade (N=4 Classes)	85.9	82.2

Variable	F	df	p<
Between Class and Ethnic Groups			
Student Ethnic Group	0.8	1/14	NS
Grade Level	2.3	2/14	NS
Ethnic Group X Grade Level	0.4	2/14	NS
Within Classes and Ethnic Groups			
Rater Ethnic Group	2.6	1/14	NS
Rater Ethnic Group X Grade	0.6	1/14	NS
Rater Ethnic Group X Student Ethnic Group	2.5	2/14	NS
Rater Ethnic Group X Student Ethnic Group X Grade	0.4	2/14	NS

TABLE 3.4

COMPARISON OF RATINGS, BY ANGLO AND LATINO TEACHERS IN THE PROGRAM OF ADAPTIVE CLASSROOM BEHAVIORS OF SAMPLES OF STUDENTS IN THEIR CLASSES

Ethnic Group of the Student			Ethnic Group of the Rater (Teacher)	
			Anglo	Latino
Anglo	Prekindergarten	(N=2 Classes)	50.8	31.8
	Kindergarten	(N=4 Classes)	38.2	32.1
	First Grade	(N=4 Classes)	38.4	30.7
Latino	Prekindergarten	(N=2 Classes)	32.4	38.4
	Kindergarten	(N=4 Classes)	31.2	37.2
	First Grade	(N=4 Classes)	36.3	38.5

Analysis

Variable	F	df	p<
Between Classes and Ethnic Groups			
Student Ethnic Group	0.3	1/14	NS
Grade Level	0.7	2/14	NS
Student Ethnic Group X Grade Level	0.9	2/14	NS
Within Classes and Ethnic Groups			
Rater Ethnic Group	1.0	1/14	NS
Rater Ethnic Group X Student Ethnic Group	6.2	1/14	.03*
Rater Ethnic Group X Grade	0.3	2/14	NS
Rater Ethnic Group X Student Ethnic Group X Grade	0.5	2/14	NS

STUDY 4. PREKINDERGARTNERS' READINESS FOR AN ALL-DAY KINDERGARTEN PROGRAM

Introduction

Rationale

As the first year of program operation drew to a close, the program supervisors at the Potter-Thomas School felt that a substantial, but unknown, number of students in the prekindergarten classes had attained a level of reading and number readiness which would not be matched by typical students entering school at the kindergarten level until several months into the school year. As a result, it was decided to request funds for planning and carrying out an all-day kindergarten program in 1971-1972 for pupils who had participated in the prekindergarten and had shown a high level of readiness skills. In order to screen students in the current (1969-1970) prekindergarten for this purpose, a special instrument was developed by the program supervisors at the Potter-Thomas site. This test was conceived as a sample of student skills in three areas, and can be regarded as having high content validity for this use.

Objectives

The test incorporates two of the skills cited in Prekindergarten Objective 1.3, Development of Number Concepts in the Prekindergarten. (The relevant parts of the objective are stated on page 17, Amendment to the Model School Proposal). At the end of one year the students at the Potter-Thomas prekindergarten would be able to do the following:

A. Count from one to ten and be able to play number games within this range.

C. Discriminate among selected shapes.

All activities in this objective were to be learned in the first language except the number sequence, which is to be learned in both languages. Observation of this objective was to be primarily through the use of the teacher's log, in which a record of performance was to be kept.

Skills described in the program guide and referring to parts A and C of this objective, and reading and writing readiness skills were included in the readiness instrument which the supervisors developed. According to the proposal most work in both first and second languages was to be oral-aural. However, when the program was put into practice some work with written materials was incorporated as well. Thus, students gained practice in using crayons as markers, and in recognizing and matching letters of the alphabet. In addition, students were given practice in discriminating colors. The prekindergarten test which was developed incorporated these skills, as well as those specified in the objectives.

Procedures

Program Description

The prekindergarten program is a half-day program, which employs

team-teaching methodology used in other grade levels--a native speaker of English and a native speaker of Spanish work with a group of about 30 students, about one-half English-speaking, one-half Spanish-speaking. During the course of the school day, students are grouped and regrouped into homogeneous language groups for activities in which they work with the teacher who is a native speaker of their mother tongue for first-language instruction, and the teacher who speaks their second language for second-language instruction. They also work in mixed groups when the activity does not require second-language skills beyond the capacities of most of the children. In this context, all pupils have been exposed to activities which parallel those appearing on the test, at least in their mother tongue; i.e., they have carried out exercise in the classroom where shapes, letters, and numbers were matched, where they had to match small groups of objects with numbers and point out objects of a specific color.

Evaluation

Sample. All students enrolled in the program and not absent on the days their classes were tested were included in the testing. The results, therefore, approximate parameters of the population of students in the prekindergarten program. The number examined was 50.

Instrument. The Prekindergarten Readiness Test (shown in the appendix) was devised by the program supervisors at the model school, to meet a specific need--ordering prekindergarten students along a continuum from best to poorest, so that those with the best skills could be enrolled in an enriched, all-day kindergarten program in 1970-71. Therefore, there is no reliability information about it, and none will be computed at present. However, before the instrument will be used again, some validation and reliability studies will be undertaken.

The first seven items require students to match the character or shape shown at the left with the identical one on the right. These items were adopted from the Philadelphia Readiness Test. The next four items require that the student make as many dots or marks as the number in each box indicates. In this part of the test the number was read aloud as well as presented visually. These items are borrowed directly from the Philadelphia Readiness Test.

The first item on page 2 of the test shows five squares, each containing from two to six dots. The student is told to pick the square with four dots and mark it. This item is an adaptation of one on the Philadelphia Readiness Test. The next six items are circles, each containing from three to eight dots and having three numbers below it. The student is to pick out and mark the number which correctly identifies the number of dots. In this part of the test the numbers are not read aloud, and the child must be able both to count the number of dots and to recognize the figure. These items are an adaptation of items used on the Philadelphia Readiness Test. The last six items deal with identification of colors. Each item consists of a box containing three of six colors (red, green, blue, yellow, orange, violet). The name of one color in each box is read aloud. The child is to indicate which circle it is. For this item, pointing is deemed sufficient indication, as the tester records the correctness of the responses.

Administration. The test was administered individually to each child by one of the program supervisors. No specific instructions were developed, because it was felt that with young children a more informal approach, in which direction was given as the need arose in the situation. All testing was carried out in the mother tongue of the child. All tests were administered during the first half of May 1970.

Results

The findings for this study of prekindergartners' readiness for all-day kindergarten is shown in Figure 4.1. It can be seen that the distribution of scores is very similar for both Anglo and Latino children. With both groups combined, nine students (18%) had perfect scores, 28 (56%) made five or fewer errors (78% correct) and 48 (96%) of the students made 13 or fewer errors (57% correct).

Conclusions

As there is no clear-cut base line against which these data can be compared, any conclusion drawn from the data must be subjective. Within this context, two observations seem warranted. First, as the test taps skills which were beyond those included in the commitment made by the original set of objectives, the good results (over half of the students scoring better than 75% correct) suggest that formal addition of these skills to next year's objectives is warranted. Thus, the classroom exercises employed to teach children colors, shapes, and number recognition ought to be formalized as part of the prekindergarten program. The second observation which seems warranted comes from comparison of the distributions of scores of Anglo and Latino pupils. As the two curves frequently intersect and never differ by more than nine percentage points, it is clear that the program has been equally effective with both ethnic groups in developing the skills observed.

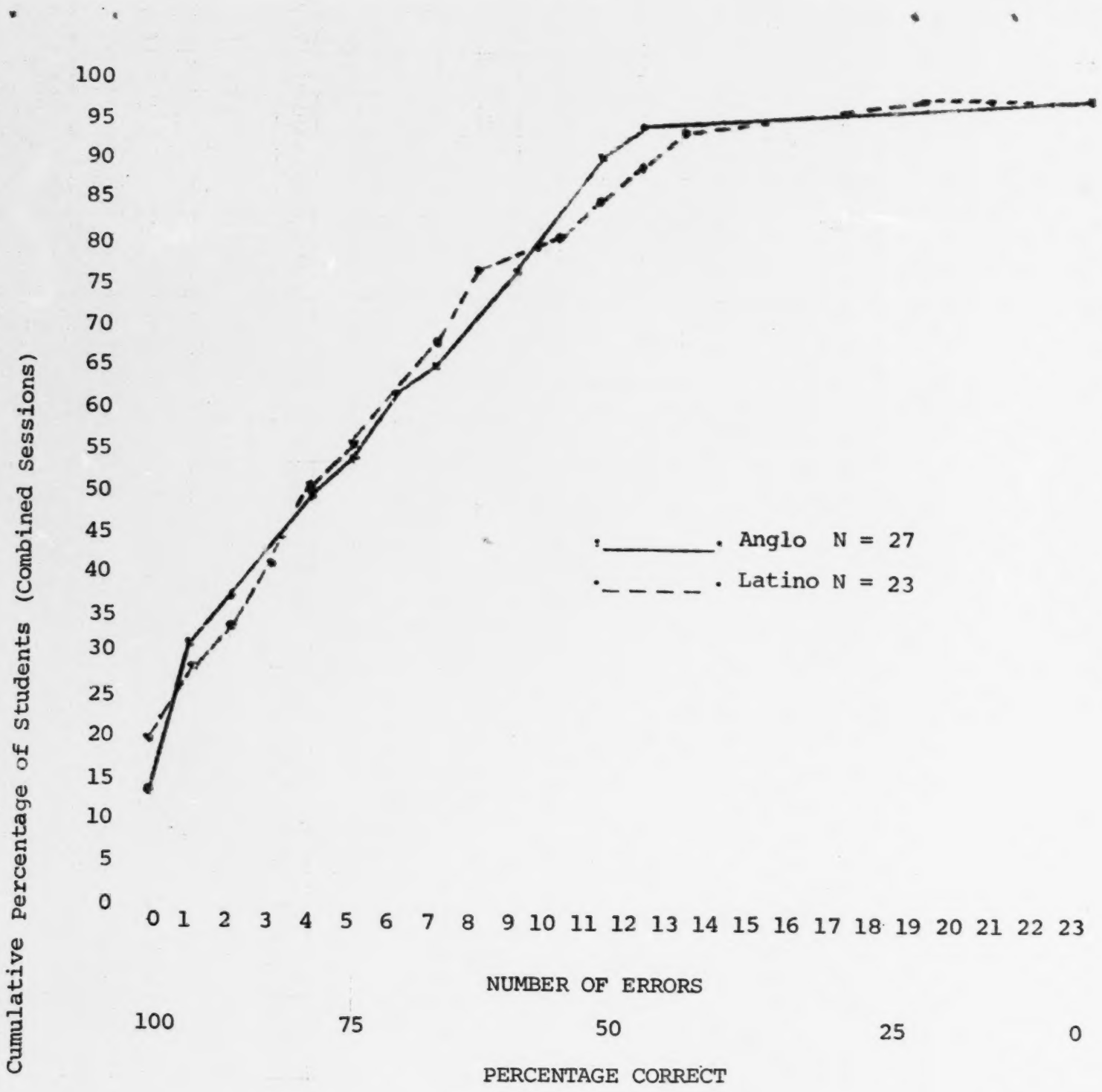


FIGURE 4.1 PERCENTAGE OF STUDENTS ATTAINING OR EXCEEDING A GIVEN SCORE ON THE PREKINDERGARTEN TEST

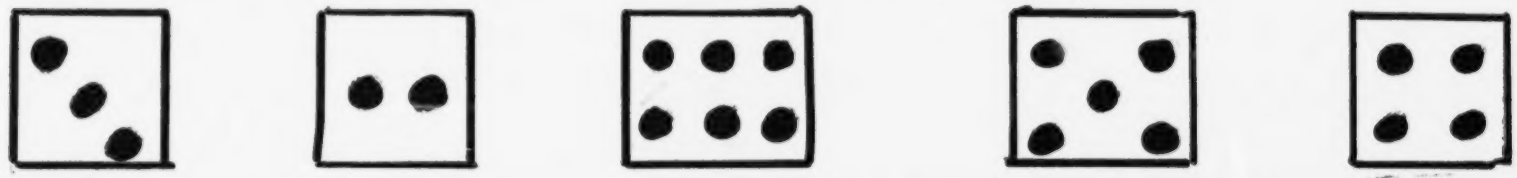
Appendix 4

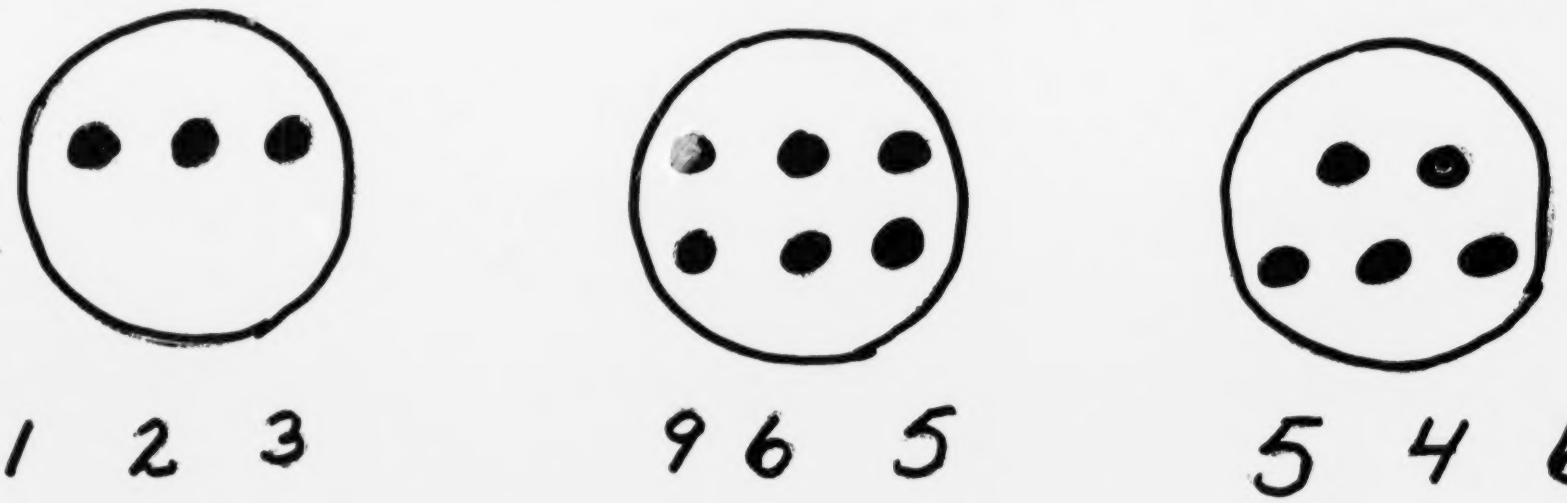
THE KINDERGARTEN READINESS TEST POTTER THOMAS 1970

NAME DATE

○	S	B	○	A
B	F	R	E	B
△	△	○	□	◇
□	○	□	◇	△
2	3	1	2	4
3	1	3	5	2
A	B	C	A	E

2	3
5	6

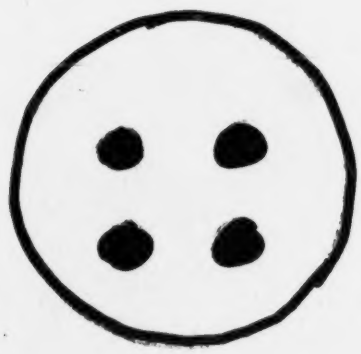




1 2 3

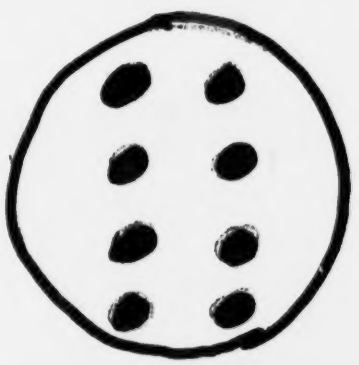
9 6 5

5 4 6

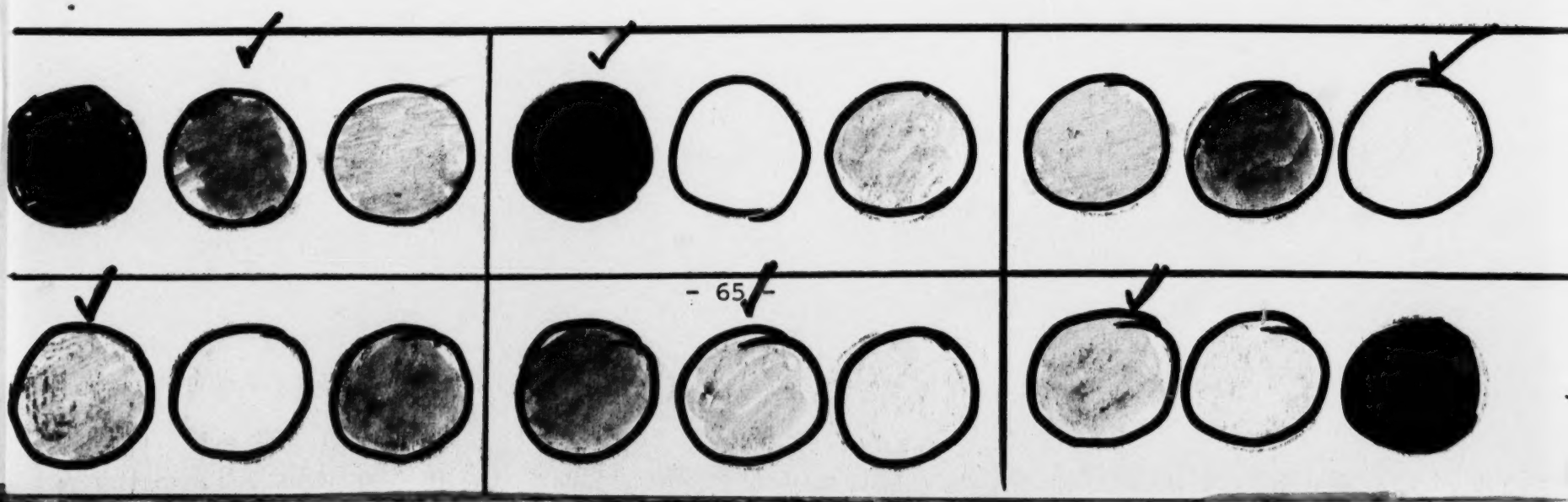


2 3 4

5 7 6



9 4 8



STUDY 5. KINDERGARTEN STUDENTS' READINESS FOR FIRST GRADE

Rationale and Objectives

Performance Objective 2.7 specified that the program would result in adequate levels of performance of students on the Philadelphia Readiness Test, which taps skills similar to those shown in sections IV-N and V-A of the Kindergarten Program Guide. "Adequate levels" were defined as performance at least as good as the Spring 1969 schoolwide mean of 20.9 (which was a bit higher than the citywide mean of 20.1), when students were instructed in their mother tongue in how to take the test. (The test items themselves are equally appropriate for Anglo and Latino students.)

In addition, a base line for Latino students tested in English was to be included, as this would permit assessment of the value of the Spanish instructions in improving student performance.

Procedures

Program Description

According to the program guide, all students in the kindergarten were to be engaged in activities in which they would identify and copy shapes, match letters and groups of letters, and perform simple numeric operations such as counting objects. These activities all were to be carried out primarily in the student's mother tongue, with some introduction of the number sequence in the second language. According to program supervisors' reports, the teachers in the main were able to carry out these activities and frequently enriched the program with activities beyond the minimums specified in the program.

Evaluation

The Philadelphia Readiness Test was shown appended to the proposal document. It is a measure of number and reading readiness, and correlates with the Metropolitan Readiness Test at 0.47. According to the proposal for the model school program, the teachers were to involve students directly in activities which parallel items on the Philadelphia Readiness test.

The first page of the test contains eight shapes to be copied, one of them being a sample. The first four (the sample and three scored items) were shapes which appear in the program guide as items which the student should have experience matching, and picking out and drawing. The remaining four "copy" items include characters which the student should have experience in identifying, but no specific "copy" practice has been specified.

The second page of the test requires students to match letters and groups of letters in a manner similar to that specified for students to carry out during the program when using the letters of their names. The number items on the test's last three pages are similar to those specified in the program guides.

For the purposes of this study, the bilingual program supervisor in the model school program prepared a set of Spanish language instructions. These were shown appended to the proposal, along with regular English instructions. The items themselves were deemed sufficiently free of language dependence, that no other alteration was necessary.

Sample and administration. The entire population of the Potter-Thomas kindergarten was included in this study. The test was administered by the teachers as it had been in the base line years: the teachers administered the test to small groups of two or three students at a time, throughout the month of May. The only difference between this testing and the regular testing usually carried out was that Latino students were randomly divided into two groups of equal size; one group took the test in English, the other group in Spanish. All Anglo students were tested in English. As in previous years, the instruments were scored by the teachers. The project evaluator reviewed the tests, to verify the scoring.

Special testing conditions. After the completion of the testing, the evaluator examined the tests. In one class the Latino students' results seemed higher than in other parts of the program and at least one question appeared to be improperly administered. A number of students had received credit for the item although it was not correctly marked on the answer sheet. To recheck the validity of the testing procedure this item was readministered by the program supervisor. In general the results confirmed the previous scoring; virtually every student performed correctly on the item. It was felt that, despite the opportunities for practice, this second administration probably represented the students' true level of skill better than the first, questionable administration. The score earned in the readministration was, therefore, included in the results.

Results

The findings are summarized in Figure 5.1, which shows the scores earned by each group against a series of baselines from the previous year. It can be seen that all three groups had scores which equaled or exceeded the citywide mean of 20.1 found in the 1969 citywide examination. Both Anglo and Latino groups tested in their mother tongues were found to exceed both the citywide and schoolwide means of last year, with the "Latino in Spanish" group exceeding the mean of the "best school" in the city during the 1969-1970 school year. The Anglo-English group had a mean of 21.7; the Latino-Spanish group had a mean of 24.4, and the Latino-English group a mean of 20.2.

Conclusions

The results indicate that when students are subjected to the program and tested in their mother tongue, the stated objective, that both Anglo and Latino at least equal the 1969 schoolwide mean, is clearly attained. In addition they suggest that among Latinos the language of the instructions to the test has a major effect in determining the score, when the instrument is administered in the context of the bilingual program.

What is most interesting, however, is the extremely high scores found among Latinos tested in Spanish. Assuming that all irregularities were eliminated in the rechecking of the questionable item, the results suggest that mastery of the number-and-reading-readiness concepts was very high in this group. Review of the Latino teachers' procedures by which these skills were presented to the students is warranted, and, if they are found to be generally appropriate, the procedures should be made available for others both in the program and outside it.

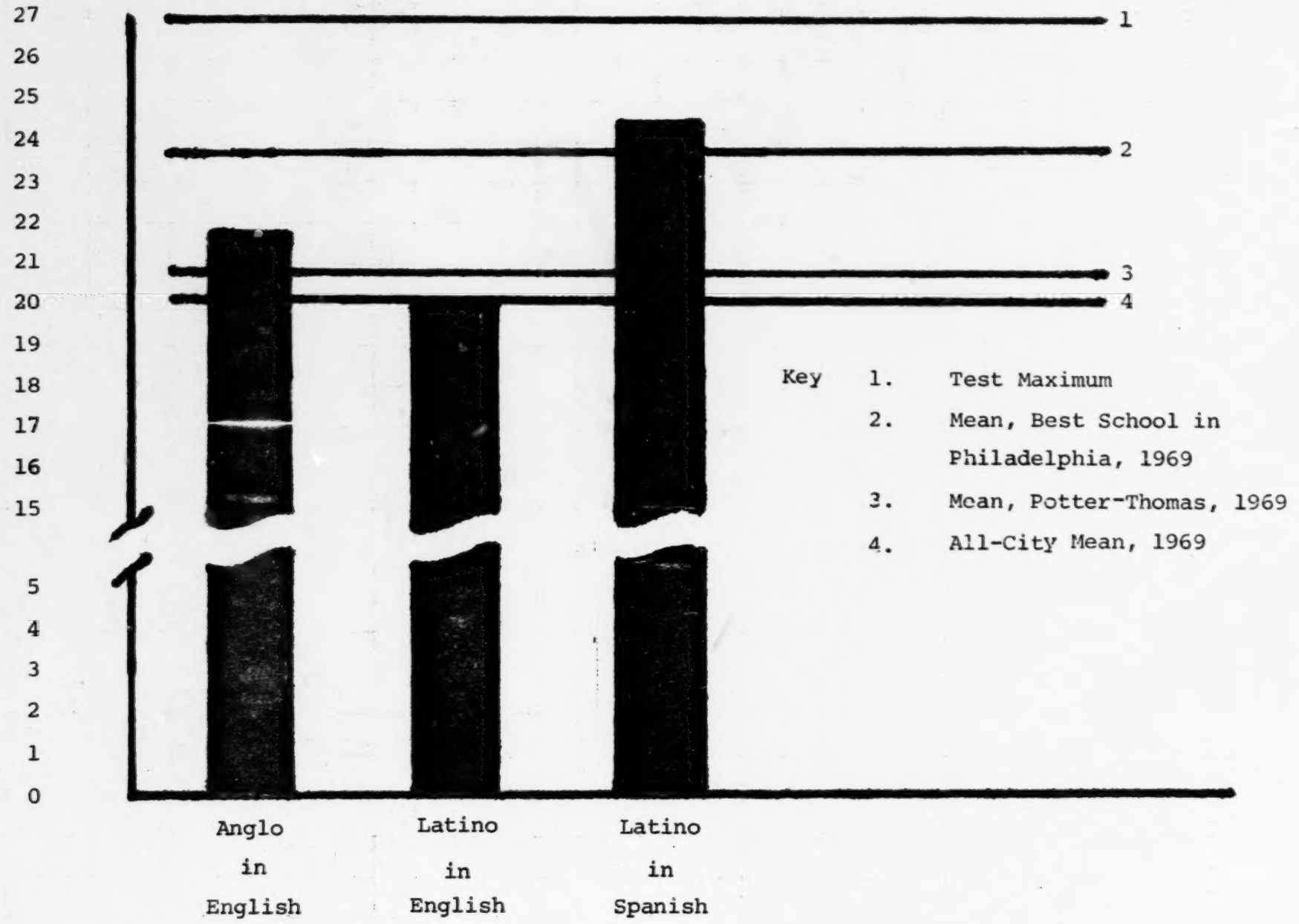


FIGURE 5.1. SCORES ON PHILADELPHIA READINESS TEST

STUDY 6. FINAL REPORT ON READING SKILLS IN THE MOTHER TONGUE IN THE FIRST-GRADE MODEL SCHOOL PROGRAM

Introduction

Rationale

The guiding philosophy of the Model School program is that the student learns all skills best when they are introduced in the mother tongue. This philosophy has led to the introduction of reading in the first grade in the mother tongue only, for both English- and Spanish-speaking pupils. When these students are in the second grade, it is anticipated that reading in the second language will be introduced.

This report is the second examination of reading skills. The interim report on reading (Appendix 6.3) noted that at the midway point of the school year Anglo students had developed larger sight vocabularies than Latinos. This was believed to be a result of differences in text lengths, with the Spanish books having nearly four times as much text for each word introduced as the English texts have. Teachers had been advised to use the Spanish books more selectively, skipping portions of the text which did not contain new material, or contained material which would be repeated.

Within this context, it appeared to the program supervisors that the rate of reading-skills acquisition became about the same, but the Anglo-Latino difference developed early in the year was maintained. As a result some Anglo students were reported as reading the Level 1 of their text series by teachers in the program. It was, therefore, decdided to include a sample of words and sentences from Level 1 for the Anglo group in the final assessment of the reading objective. It should be noted that any attainment at this level is beyond that contracted in our preparation of the original objective stated below.

Objective

The revised proposal for the Model School program stated that in the first grade 90% of the students would be able to recognize 80% of the vocabulary introduced by the pre-primer and primer levels of the reading series used in the program. (The Laidlaw readers in Spanish for Latinos and the Bank Street readers for Anglos.)

Procedures

Program Procedures

About two months after the beginning of the formal operation of the Model School program, formal study of reading using the prescribed readers was begun in all classes. The books in use are The Bank Street Reading Series (In the City, People Read) in the English language for the Anglos and the Laidlaw Reading Series (Camino de la Escuela, Aprendemos a Leer) in the Spanish language for the Latinos. According to the program supervisors, before the readers were introduced, preparatory activities such as matching and identifying letters and using experience charts were used in all classes.

Following the interim report on reading, the project director recommended that the Spanish readers be used selectively, skipping portions which merely review previously introduced material. According to program supervisors this recommendation was carried out in the classes.

Evaluation

Instrument. In order to ground the test directly in the materials used in the text, special instruments were prepared which consisted of words in the pre-primer, primer and (for English-speaking students) Level 1 texts used in the program. As the vocabulary included in these texts is quite large, sampling of vocabulary of about 1/5 was used for the primer and Level 1 texts. To make the test more compact, words were grouped into phrases and short sentences. However, the scoring was word by word, so that the percentage of students recognizing each word could be easily calculated.

Two separate tests, one in English and one in Spanish, were prepared. Both are shown appended to this paper. The words, phrases and short sentences which were included in each were written in manuscript by hand on ditto masters and reproduced. As was noted before, the English language test includes material from the Level 1 book of the Bank Street series as well as from the pre-primer and primer levels.

During the first week of June every student was tested individually in his mother tongue by one of the program supervisors (the one who was a native speaker of the appropriate language). The student was presented with a copy of the test and was asked to read aloud the words, phrases and sentences before him. No coaching was permitted, but students were generally encouraged to try.

Population. All students enrolled in the four experimental first-grade classes of the Model School program participated. The results are therefore parameters of the first-grade participant population.

Results

The English language reading text for the pre-primer and primer levels contained 46 words, including repetitions (in appears twice and the appears twice). As it was felt that the recognition of these words might vary with the context in which they were imbeded, each repetition is counted separately. To attain a score of 80% correct, a student had to make nine errors or less. Among the 67 Anglos tested, 32 or 47.8% attained this level. Eleven of these had perfect scores. At the opposite end of the continum, three students did not recognize a single word. One of these three students has been diagnosed as brain-damaged according to information provided by a program supervisor.

The Spanish language reading test included 48 words including repetitions (la appears four times; y appears three times). To achieve the objective of 80% correct, a student had to make 10 errors or fewer. Of the 58 students who were examined in the June testing, 26 or 44.8% attained the objective. Three of these had perfect scores, but five students failed to recognize a single word.

For both language groups, these results are below the 90% of-the-students-recognizing-80%-of-the-words goal which was set in the proposal. Reanalysis on the basis of the sight-vocabulary word rather than on the basis of the student may help to clarify the situation.

To this end, the data have been reorganized and displayed in Figures 6.1 through 6.4.

With the "word" treated as the independent variable and the percentage of students recognizing it as the dependent variable (as shown in these figures) the minimum average rate of recognition for each word would be 72% (90% x 80%) for the objective to be obtained. If this is treated as a baseline, it is possible to see where the pupil performance departed from the expected outcome. Figures 6.1 and 6.3 show that, in both the English- and Spanish-speaking groups, overall performance in the pre-primer was about the minimum that would be expected if 90% of the students had achieved 80% correct. Figures 6.2 and 6.4 show that performance on the primer-level materials was substantially lower than the minimum acceptable level. Among Anglos only the word I exceeded this baseline (in and the, approximating it, also appeared in a pre-primer derived phrase.) Among Latinos, no newly introduced word exceeded the baseline (la, which exceeded it, appeared in the pre-primer).

As was noted earlier, some Anglo children had begun to work with Level 1 books. Five phrases and sentences, consisting of 20 words, four of which were repeated from earlier levels in this part, were included (play around town, but I like water, too, the big dog jumps, Carmen went to the mailbox, your new teacher.) Thirty-four or 50.7% of the pupils were able to read at least one word not appearing in the more elementary books. Among these, four students were able to read all the Level 1 sample correctly. Fifteen others were able to read this material with five or fewer errors.

Conclusions

Overall, the findings of this study suggest that the initiation of the program using Spanish-language Laidlaw readers more selectively has resulted in both Anglo and Latino students demonstrating similar levels of skill on pre-primer and primer materials. Therefore, the suggestion made after collection of data for the interim report on reading seems to have been appropriate. The finding that some Anglo students have begun to work effectively with Level 1 materials tends to confirm the interim suggestion that the initial difference found has been maintained but that progress since then has been about the same for Anglos and Latinos.

The finding that the objective of 80%-90% was not attained suggests that some review is in order. As the program was not organized until October, exploration by the project supervisors of whether this delay and possible delays in getting texts and materials into the students' hands can underlie the findings, seems appropriate. Should no such contingency factors be found, reexamination of the mannter in which reading was taught and/or the criteria built into the objective would be warranted.

The wide range of competencies at the end of the first year of program operation suggests that the restructuring of the reading objective may be warranted. In order to take into account the likelihood that students (a) will be ready to begin to read at different times, and (b) can be expected to proceed at different rates, a series of goals for easily differentiated subgroups may be more appropriate than the cutoff point used in this year's objective.

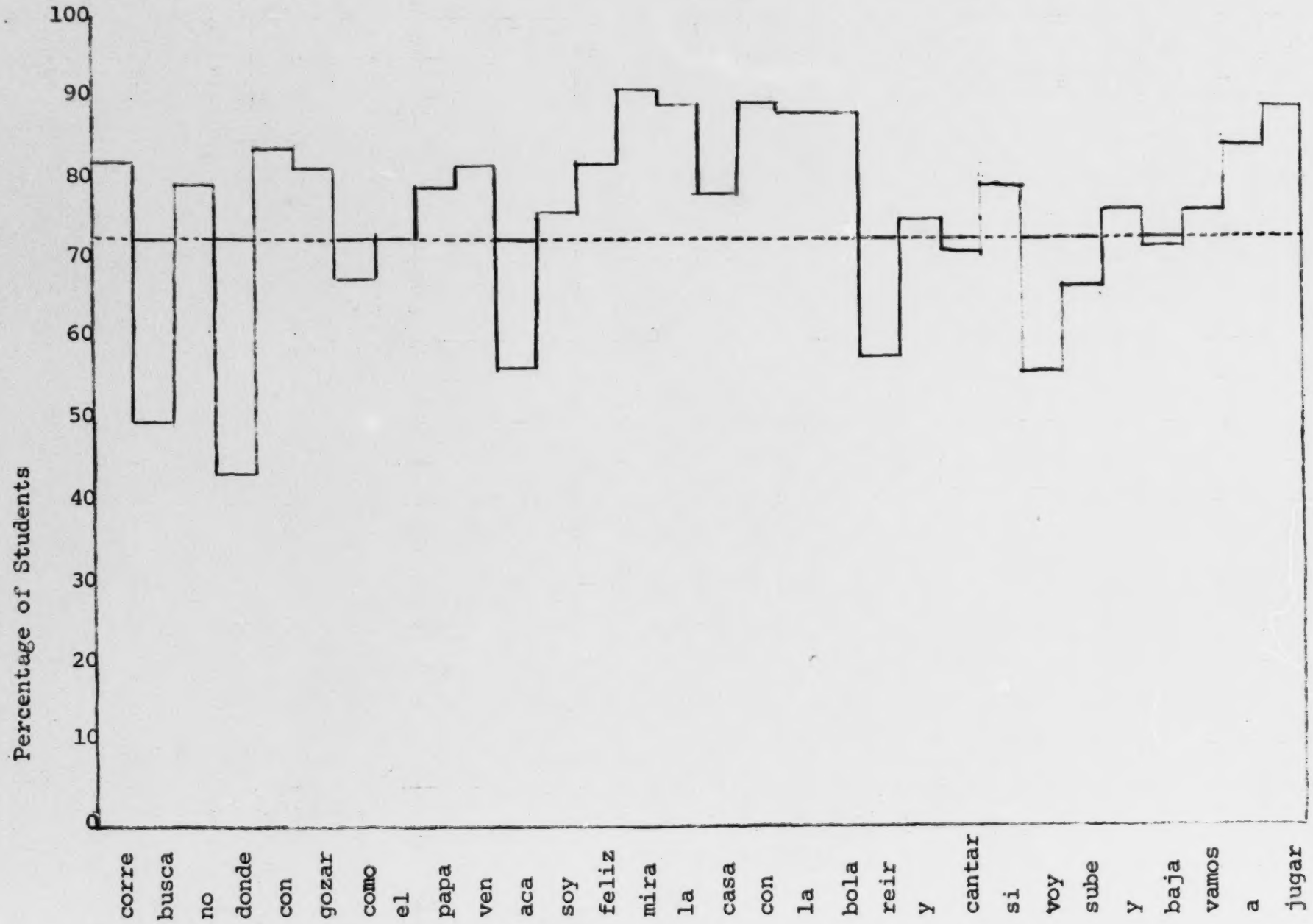


FIGURE 6.1 PERCENTAGE OF LATINO STUDENTS CORRECTLY READING EACH WORD IN THE PRE-PRIMER LEVEL

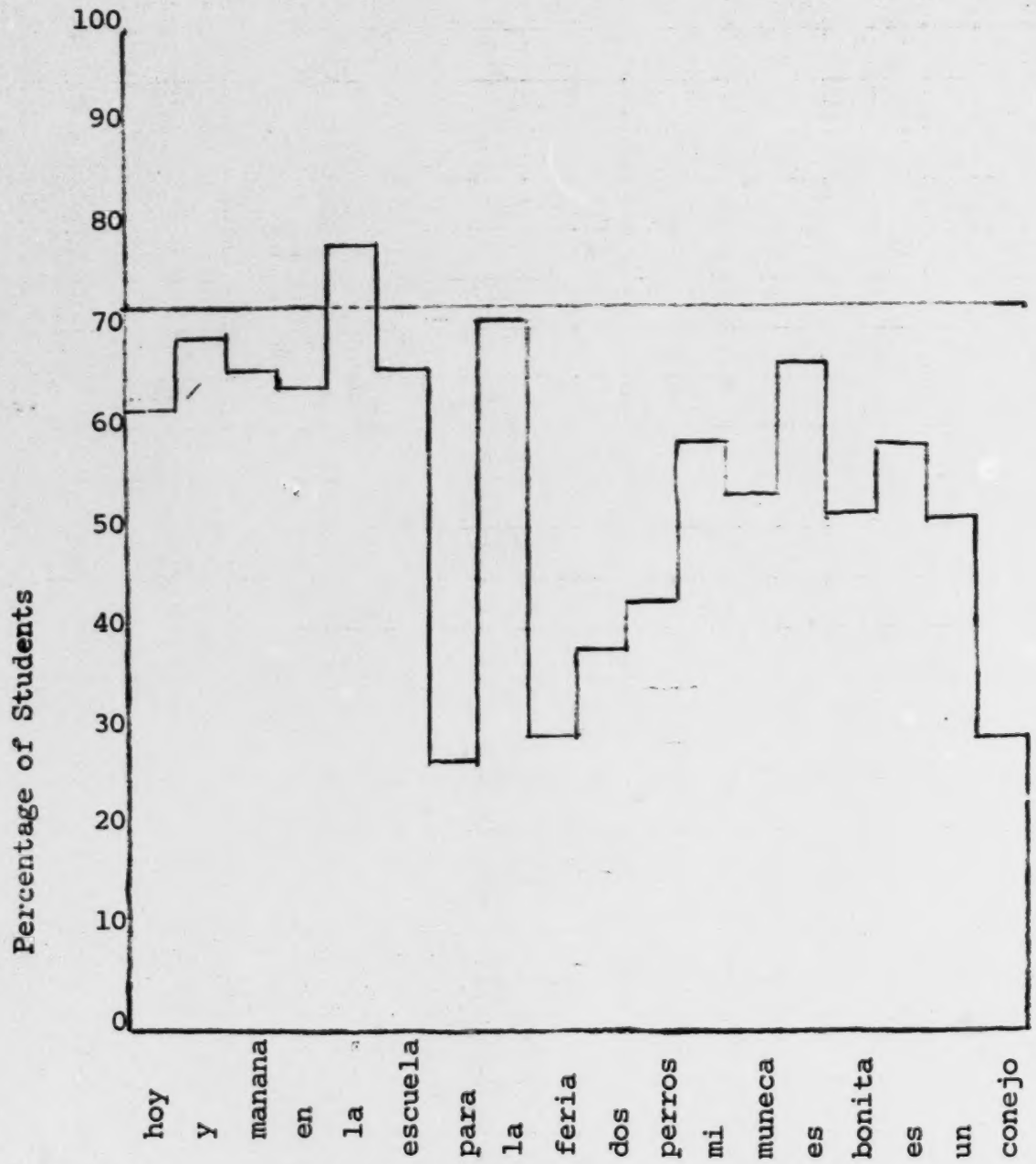


FIGURE 6.2 PERCENTAGE OF LATINO STUDENTS CORRECTLY READING EACH WORD IN THE PRIMER LEVEL SAMPLE

FIGURE 6.3 PERCENTAGE OF ANGLO STUDENTS CORRECTLY READING EACH WORD IN THE PRE-PRIMER LEVEL

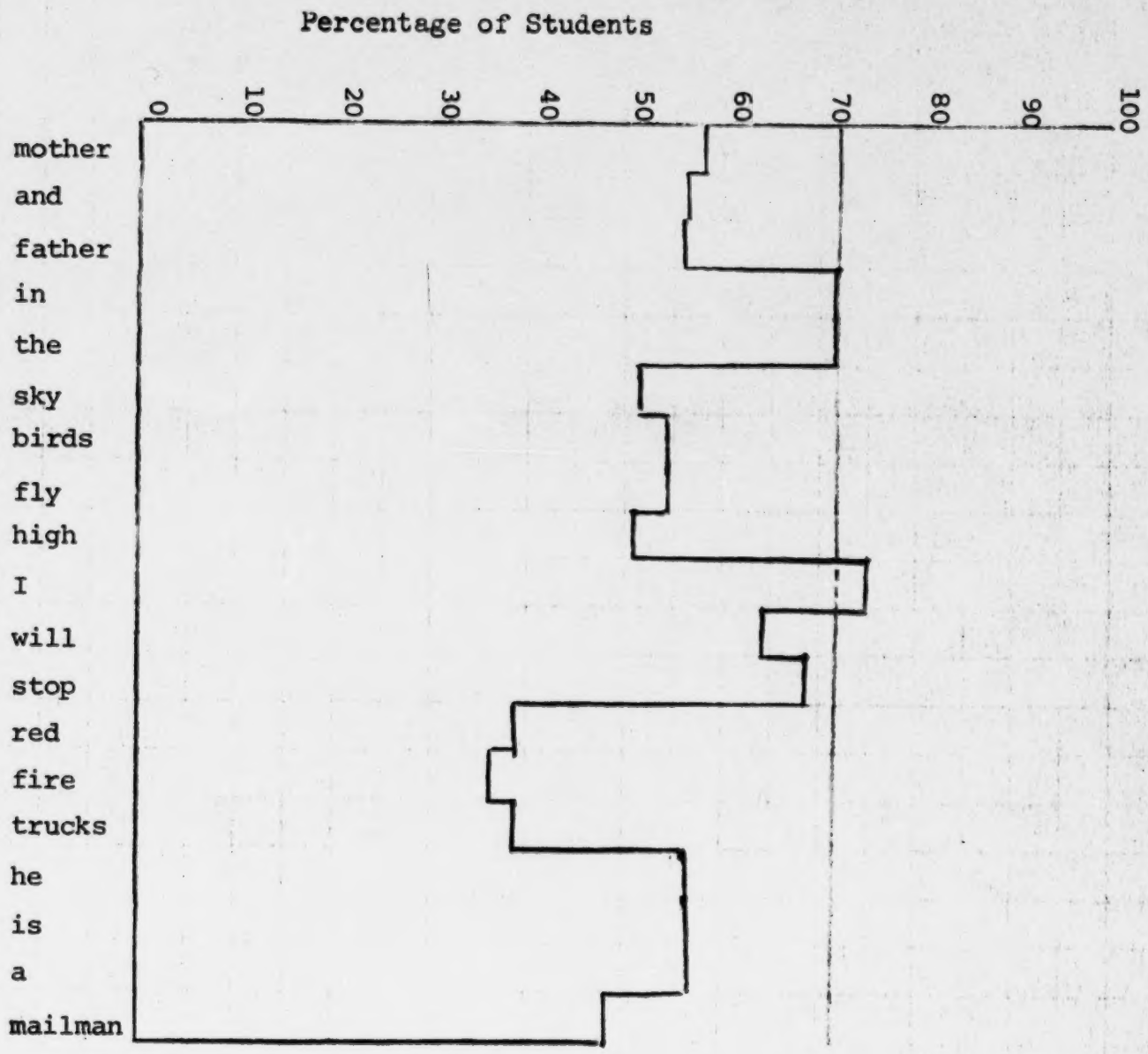


FIGURE 6.4 PERCENTAGE OF ANGLO STUDENTS CORRECTLY READING EACH WORD IN THE PRIMER LEVEL SAMPLE

Appendix 6.1: YEAR-END READING TEST - ENGLISH

NAME	Teacher	Date

three

are

out

up

down

night

on

good

in the city

one house

many streets

people work

two stores

They go to school.

Boys and girls run.

mother and father.

in the sky

birds fly high

I will stop

red fire trucks

He is a mailman.

play around town

But I like water too

The big dog jumps.

Carmen went to the mailbox.

your new teacher.

Appendix 6.2: YEAR-END READING TEST - SPANISH

Name:	Books:	Date:	Teacher

corre	Ven acá
busca	Soy feliz
no	Mira la casa
donde	con la bola
con	reír y cantar
gozar	Sí, voy
cómo	sube y baja
el papá	Vamos a jugar

hoy y mañana
en la escuela
para la feria
dos perros
Mi muñeca es bonita.
¡Es un conejo!

Appendix 6.3

INTERIM REPORT ON READING IN THE FIRST GRADE (FEBRUARY, 1970)

Introduction

Rationale

As the first grade demonstration program at the Potter-Thomas Model Bilingual School unfolded, by January it became evident to the project director and program supervisors that interim feedback as well as year-end assessment would be valuable in order to determine whether the instruction in reading was proceeding at a rate which would suggest completion of the target for the year.

Objective

Objective 3.7 included performance specifications for reading and writing. The reading portion stated that both English-and Spanish-speaking first-grade students would complete the pre-primer and primer levels of the reading text in their mother tongue (the Bank Street reader series for students whose mother tongue is English, and the Laidlaw Series of readers for students whose mother tongue is Spanish). The target was that 90% of the students would be able to read 80% of the words in the pre-primer and primer text levels by the end of the school year.

Procedures

Instruments

In order to ground the observation of reading skills directly in the curriculum studied, it was decided to prepare special instruments, which consist of all words (excluding proper nouns and expletives) appearing in the pre-primer level of the English and Spanish texts. Tests were written in manuscript, in one-half-inch-high letters, and presented the words in the pre-primer in the order in which they appeared within the text. When it was found that nineteen English-speaking students were able to read nearly all vocabulary words at the pre-primer level, a similar test covering vocabulary words in the English primer level was prepared in order to assess further the functioning of these students.

During the first week in February, students were tested individually on the pre-primer level in their mother tongue. One of the two program supervisors (the native speaker of the student's mother tongue) presented the student with a mimeographed copy of the pre-primer test sheet in his mother tongue and asked the student to read each word aloud. No coaching was permitted, but students were generally encouraged to try. The following week, the nine students who were able to read all words in the pre-primer level with less than six errors were tested on the primer level. All of these students were English-speaking.

Population

All students in the four experimental first-grade classes participated in the testing situation. The results are therefore parameters of the population defined by participation in the first grade in the Model School program.

Analysis

As the results are population parameters, no statistical manipulations of the data are appropriate.

Results

Figure 6.5 shows the frequency of word recognition among Latino students. In general, words appearing earlier in the pre-primer level were recognized by more students than those presented later. However, the trend was not without reversals. Six of the first fifteen words were recognized by over 70% of the students (five of the first seven, and the fifteenth word). Overall recognition declined slowly within the list, with the last five words averaging 10% recognition.

Figure 6.6 shows that the pattern was similar for Anglo students, except the decline was not nearly as rapid. As with the Latinos, six of the first fifteen words were recognized by over 70% of the students. However, among Anglo students, recognition at the end of the list was maintained at nearly 40%.

As the recognition rate was very high for some Anglo students, it was decided to test the group of nineteen students who had made less than six errors on the primer English list. This list consists of fifty-two new words. Each of the first fifteen words on this list was recognized by at least 42% of this select group of students, with two words ("boy" and "come") recognized by 95%, three words recognized by 80%-89%, and four other words recognized by 70%-79%. After the fifteenth word, the recognition rate dropped sharply to 16%, where it remained for the next twenty-four words with four exceptions, "she", "her" "it" and "some" which were recognized by 11%. This steady rate represented superior performance of three students. Two students (11%) recognized all of the next ten words with one exception, "fire". This left four words in the English primer-level text not recognized by any student. Contact with the two English-language first-grade teachers confirmed that all nineteen students who were able to recognize words from the primer level had begun using that text by the time they were tested.

Conclusions

One factor contributing to the findings that Anglos had larger sight vocabularies than Latinos was that there had been a delay of about one month in the delivery of the Laidlaw texts used by the Spanish-speaking students. However, the project staff felt that this was not a complete explanation, because the use of other methods of beginning reading development with Latinos (such as experience charts) should have minimized the differences observed. In addition, the staff felt that the Spanish language, being phonetic, was probably earier for the students to learn. Moreover, reports from Spanish language teachers suggested that they were satisfied with the progress students were making in moving through the text materials. The findings, coupled with the teacher comments, then suggested to the project director and program supervisors that the discrepancy might be found in the texts in use.

Examination of the books in the Bank Street and the Laidlow reading series did in fact suggest that differences in materials could underlie the findings. Although both texts introduced nearly the same number of words (twenty-nine for the English-language Bank Street pre-primer, thirty-one for the Spanish-language Laidlaw pre-primer), the texts were of markedly different lengths. The Spanish text contained nearly twice the number of pages, and roughly twice the amount of written material per page. As the program structure made it necessary for about the same amount of time to be devoted to reading by both English- and Spanish-speaking pupils, the text length probably accounted for the observed discrepancy. If the reading speed of both groups was approximately the same, the differences in text length would result in the English-speaking pupils' being introduced to about four times as many words as the Spanish-speaking students during any given time period.

This suggested that proceeding continuously through the Laidlow pre-primer would not be an efficient method of continuing to teach reading to Spanish-speaking students. To work out a better method, the director and the program supervisor asked three Latino students to read aloud portions of the Spanish text ten to fifteen pages beyond their reading level as reported by their teachers. It was found that with the exception of a few newly introduced words, students could generally read at a level far beyond that indicated by their class activity. When provided with brief practice on newly introduced words, these students seemed to be able to read the more difficult texts without problems.

As a result of this examination, a stopgap procedure was developed, whereby teachers would introduce some new reading words independently of the text and then have students skip portions of the text and read selections in which all of the newly introduced vocabulary words appeared.

A better, long-range solution to the problem of text difference would be to prepare new materials, similar in length and style to that used in the Bank Street readers, but using appropriate vocabulary for introducing reading to Spanish speakers. Consideration of a request for funds to develop such materials seems warranted by these findings.

FIGURE 6.5 FEBRUARY READING TEST, LATINO CHILDREN, PRE-PRIMER LEVEL

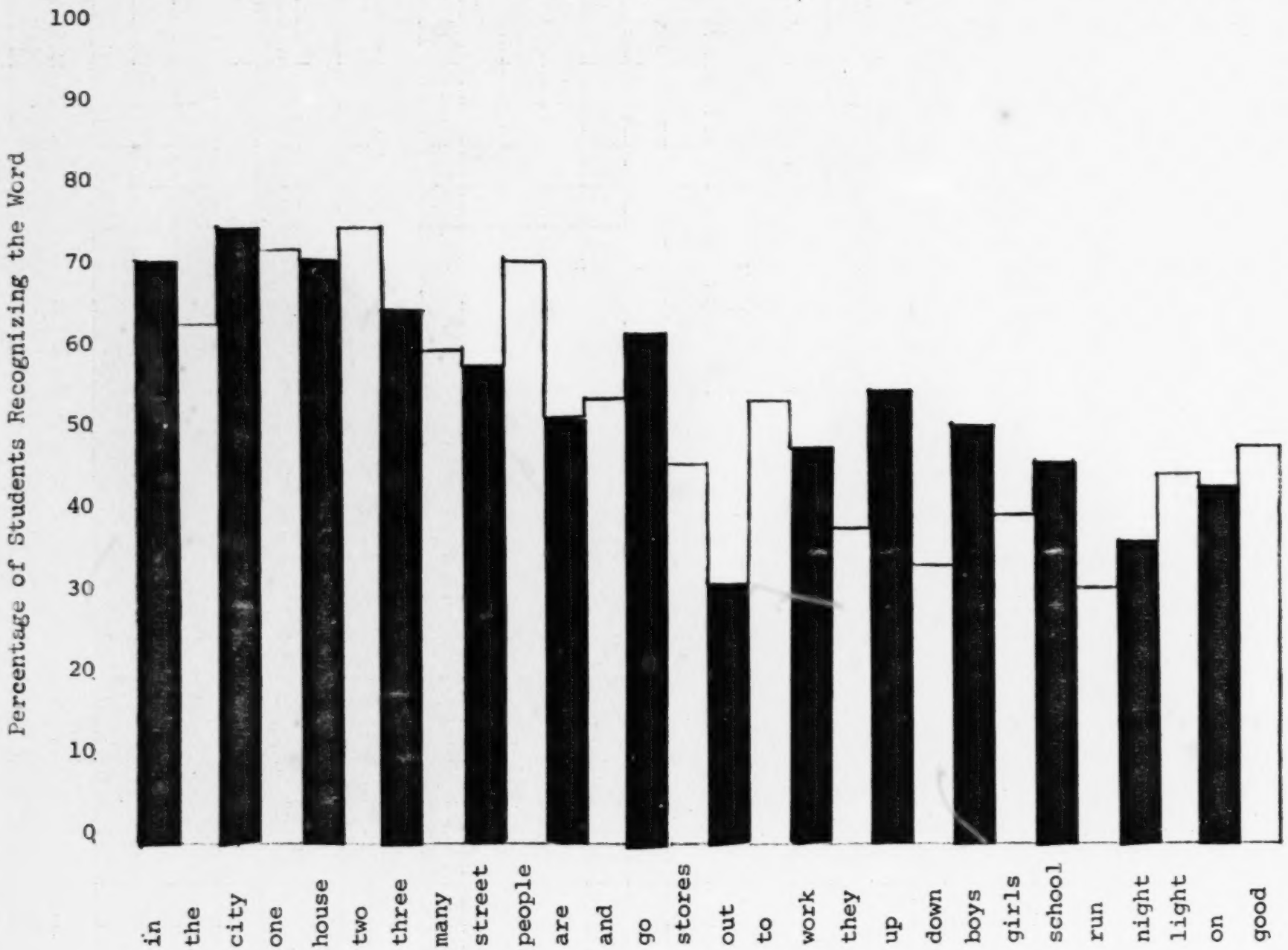


FIGURE 6.6 FEBRUARY READING TEST, ANGLO CHILDREN, PRE-PRIMER LEVEL

STUDY 7. WRITING IN THE MOTHER TONGUE IN THE FIRST-GRADE MODEL SCHOOL PROGRAM

Introduction

Rationale

As is common in most traditional elementary school programs, writing in manuscript is introduced in the first grade of the Model School program. However, in harmony with the overall goal of approaching the student first in his mother tongue, any writing activities are to make use of the vocabulary of the students' first language. During subsequent years, these students will also be introduced to writing the second language.

Objective

The proposal for the Model Bilingual School as amended specified in Performance Objective 3.7 (Reading and Writing in the First Language) that all students in the program would learn to write in their mother tongue. As the year progressed, the specific skills to be developed were clarified, and the observation method set. This refinement permits restatement of the writing part of objective 3.7 in more operational terms:

> When using criteria established and the instruments developed to observe writing skills in the mother tongue, at least 60% of the students will be able to score 80% or better on each part of a test which includes (a) copying isolated letters, (b) copying isolated words, and (c) copying brief sentences, based on vocabulary appearing in the reading textbooks used by the children in the program.

The specific judgment criteria implied in this statement are shown in the Procedures section, below.

Procedures

Program Description

The teaching of writing in the first grade was carried out in manner similar to that used in most elementary schools, with both experience charts and material derived from reading texts used as source material. Teachers planned and carried out the activities under supervision of the program supervisor but were generally left free to develop their own teaching strategies. The prime restrictions on these activities were (a) that students should be able to write words and phrases which they could read, and (b) that all writing was to be in the students' mother tongue.

Evaluation

In teaching writing skills, teachers frequently mimeographed forms on which the students filled spaces by copying material already printed on the form. The identical format was used in preparing a test for the students. This enabled the writing test to be presented by the teacher as a regular classroom exercise.

Instruments. The test prepared in each language (See Appendices 7.1, 7.2, 7.3) had three parts. The first part (identical in both Spanish and English forms) contained six letters, including the two which teachers in the program judged to be the easiest for children to copy (i and t) and four (m,p, j, and s) judged to be more difficult. The second part of the test contained three words, each to be copied separately. The third part contained three short sentences. Parts II and III were designed to include vocabulary appearing in the readers. Items were selected to include aspects of writing which seemed difficult to master: letters which extend above and below lines, (e.g. b versus p) or similar shape (g versus y; r versus n, etc.) The difference between the parts was that in the second the student must make discriminations only within one word, but in the third part discriminations must be made within a line of lettering, including spacing, capitalation, and punctuation.

The two forms of the test were judged by the program supervisors to be of about equal difficulty, but the words selected and, hence the frequency with which each character appears on the test, differed. The test was made this way because it was felt that it was more important to hold familiarity with words (due to their appearance in the reading materials) constant than to match the actual number of times each character appeared in the test.

During the planning of the instrument it was found that teachers were having their children practice writing differently. One of the Spanish-speaking teachers was having her children write so that uppercase letters filled a standard line, and lowercase letters only one. Two versions of the Spanish test were then prepared, with material written in each of the two spacing formats.

The test administered in the classroom, by the teacher, as a regular classroom activity. However, the program supervisors observed the testing as it took place, to assure that appropriate procedures were followed. Originally it was expected that students would be tested twice, once in March (to provide feedback to the teachers) and again in May (to provide data for the final evaluation). The multiple exposure of students to the test was felt to be beneficial, in that the researcher's intention was to collect data under ideal performance conditions, without interference from the students' unfamiliarity with the specific test procedures. However, upon scoring of the tests made in March it appeared that the objective for the program was already attained. As the resources required to carry out the second examination could be used elsewhere, the second testing was dropped.

In scoring the writing tests it was necessary to take into account (a) that the English and Spanish tests would be of somewhat different length and (b) that the learning of writing in the first grade centers on legibility, without interference of the handsomeness of the penmanship. To take into account both of these problems, a scoring method in which the written materials would focus on the student's work in a letter-by-letter (microscopic) manner was devised. After the program supervisor's discussion with the project director and the evaluator, the three sets of criteria (one for each part of the test) were developed. These criteria are shown in Appendix 7.4 of this study. When these criteria were used, the score for each part of the test was computed using the following formula:

$$\text{Percentage correct} = \frac{\text{Total number of characters - Numbers of errors}}{\text{Total number of characters}}$$

One week before the administration of the test, a version in English using single-space format was tried out on a sample of Anglo students. Ten of these tests were selected at random and scored independently by the two program

supervisors, in order to check the clarity of the instructions for scoring. Interrater reliability obtained from this preliminary version was +.98.

Population. As all students in the first-grade program participated in this testing, the results are parameters of the first-grade program-participant population.

Analysis. The objective stated a minimum level of acceptable performance. Therefore, no statistical manipulation was performed other than tabulating a cumulative frequency distribution for the parts of the tests and comparing each with the criterion.

Results

The findings are shown in Figures 7.1 through 7.6. Each is a cumulative frequency curve of the number of errors made by each student. an asterisk on each curve shown in the figures shows the minimum outcome for attainment of the objective, 60% of the students getting 80% of each part of the test correct. If this asterisk is at or below the curve shown in the diagram, the objective was attained or exceeded. If the asterisk is above the curve, it indicates that the objective was not attained. As can be seen from examining the curves, the objective was attained by both Anglo and Latino groups on all parts of the test during May, 1970, as the curve passses above the criterion point in all cases.

In part 1 of the test, where the students had to copy individual letters, nearly every student tested attained the 80% correct goal, among both Latinos (where 96% of all students attained or exceeded it) and Anglos (where 92% attained or exceeded it.) Part II of the test, where the students had to copy the letters as they formed words, proved to be a bit more difficult. Seventy-eight percent of the Latinos attained or exceeded the criterion, and 75% of the Anglos attained or exceeded it. Part III, where students had to copy short sentences, proved to be more difficult for Latinos than for Anglos. Sixty-three percent of the Latinos and 86% of the Anglos attained the criterion.

As two test formats were used for Latino students, double-spaced (which was also used for all the Anglo students) and single-spaced (which was used only with students of the Latino teacher who had students practice in that manner) a check was made to see whether there were discrepancies in the classes which could account for the difference in Anglo-Latino scores on Part III. Some were found. Sixty-eight percent of the students exposed to the double-space format attained the objective, but only 58% of the students exposed to the single space format attained it.

However, as the children not only need different spacing on the page but also were taught by different teachers, the inference that the double-spacing method is a better teaching strategy can only be tentative.

Conclusions

It appears clear that the objectives for writing were attained ahead of schedule by both Anglo and Latino students in the bilingual school. The difference observed between the groups of Latino students who were taught using the single and double formats, suggests that the project director's preference for teaching writing using double spaces appears valid and should be used universally next year, if possible.

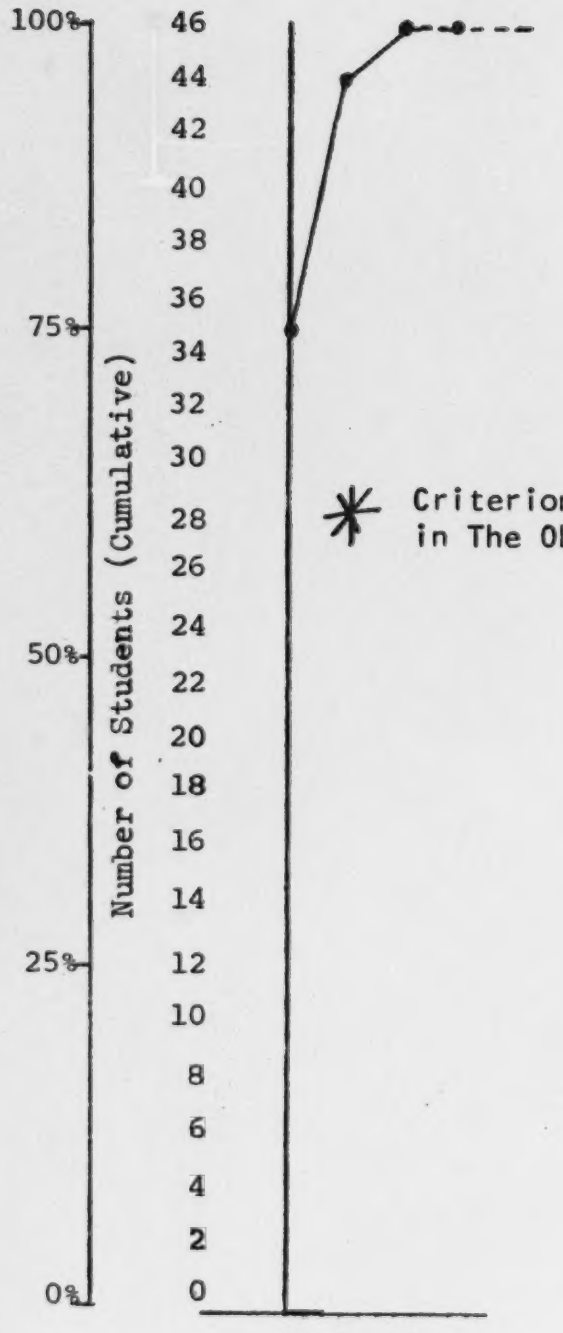


FIGURE 7.1 Ogive of Student Performance on Spanish Writing Test, Part I Letters

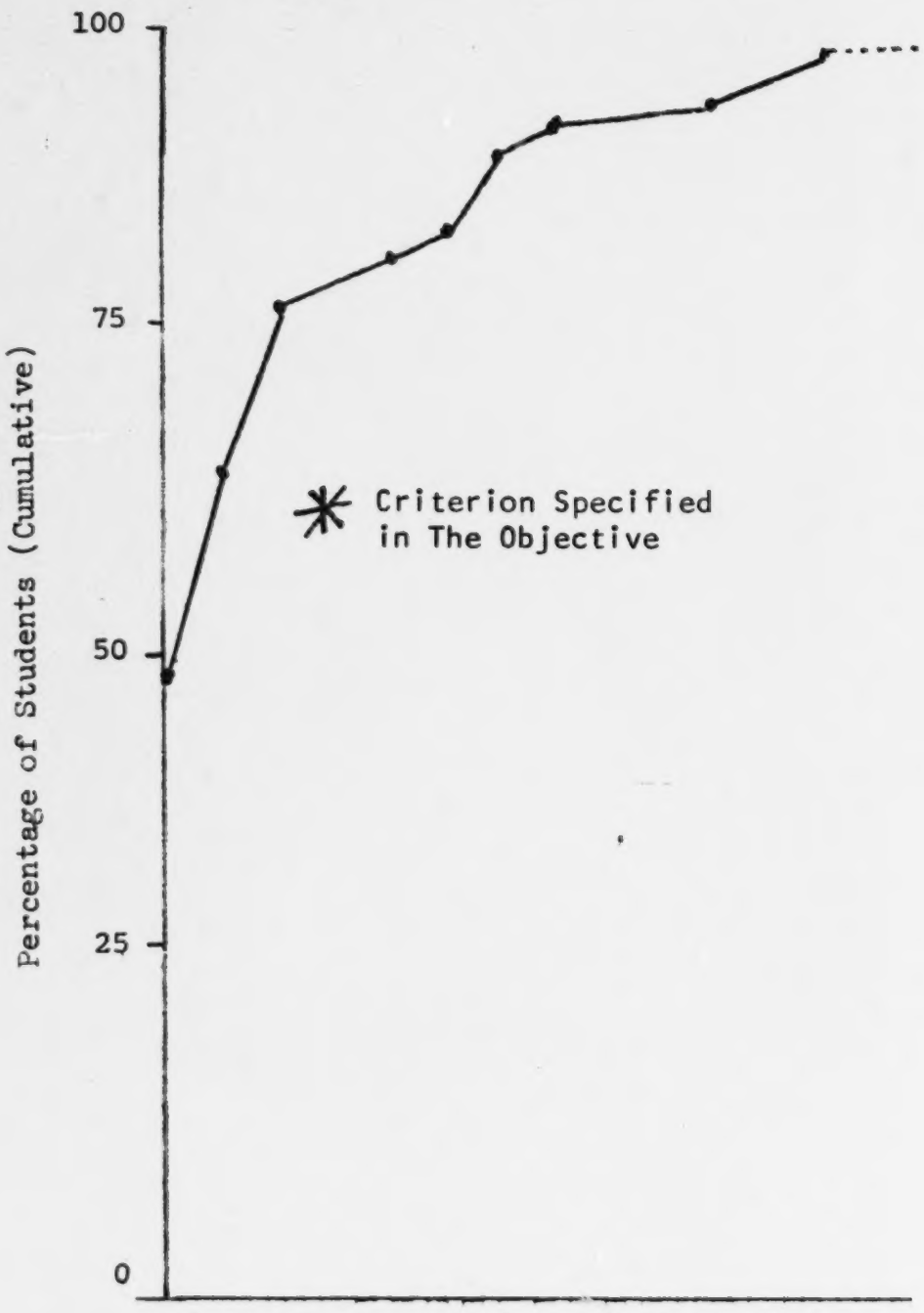

Percentage of Students (Cumulative)
100
75
50
25
0
Criterion Specified in The Objective
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Number of Errors
100 92 84 77 69 62 54 46 38 31 23 15 8 0
Percent Correct

FIGURE 7.2 Ogive of Student Performance on Spanish Writing Test, Part II, Words

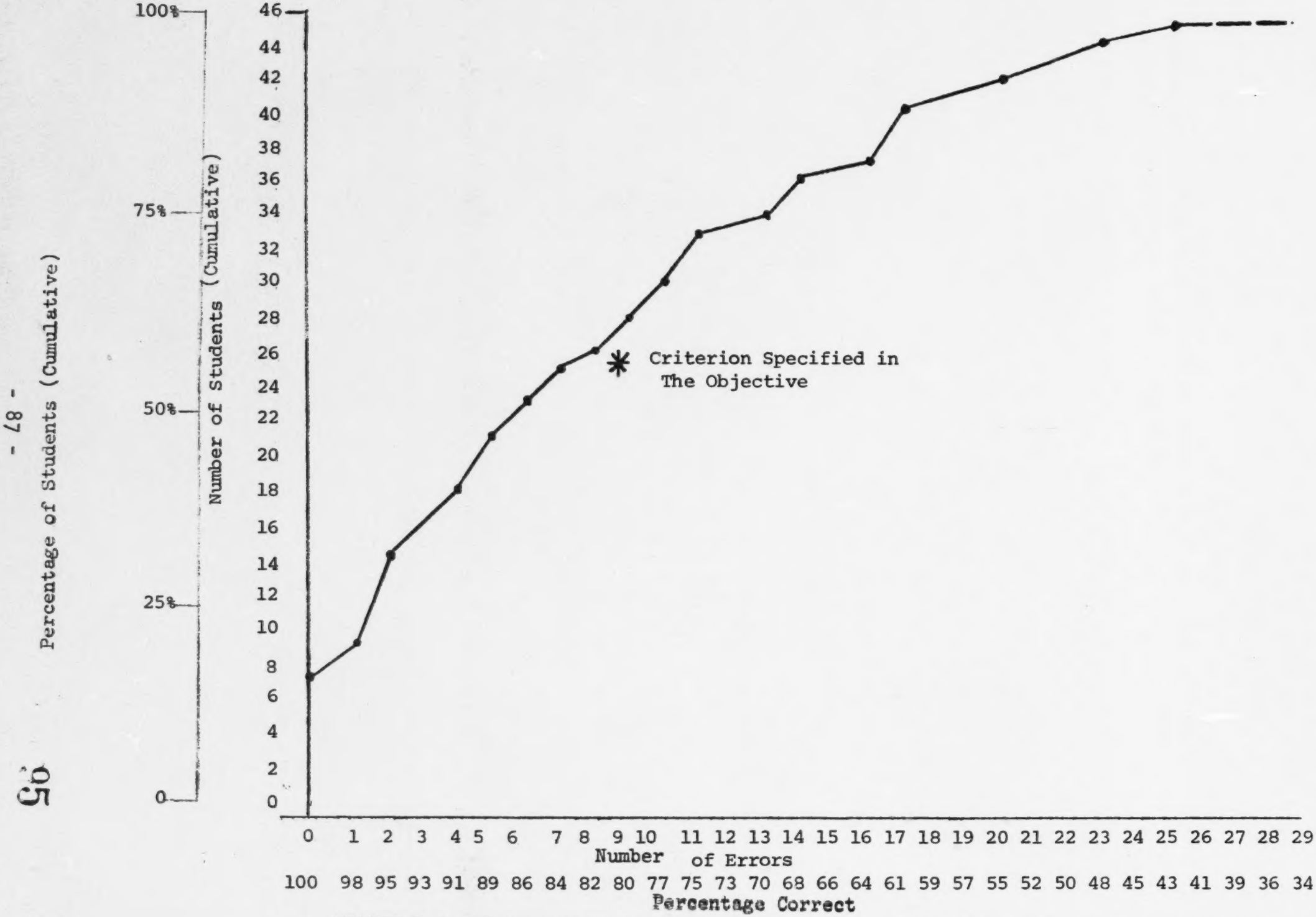


FIGURE 7.3 Ogive of Student Performance on Spanish Writing Test, Part III, Sentences

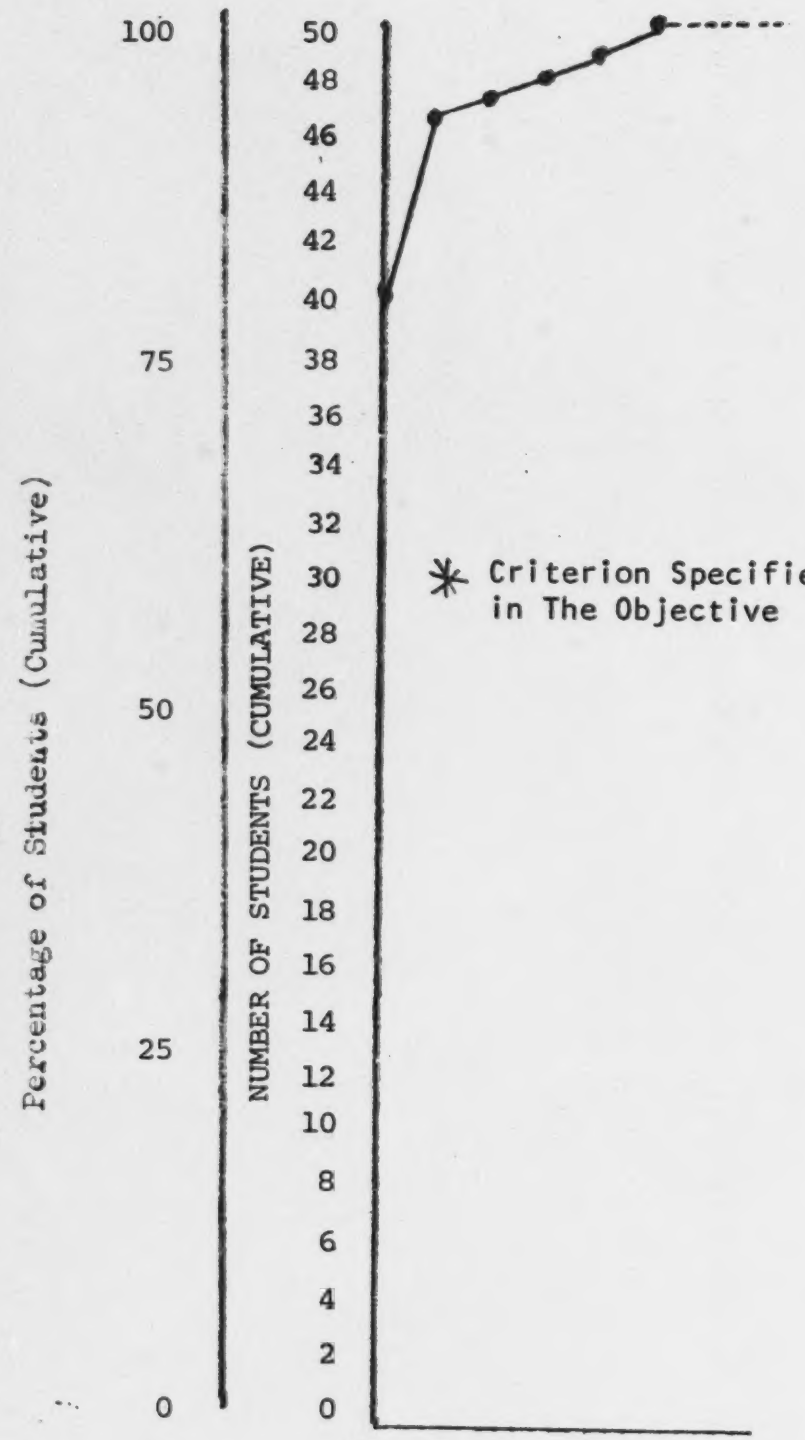


FIGURE 7.4 Ogive of Student Performance on English Writing Test, Part I

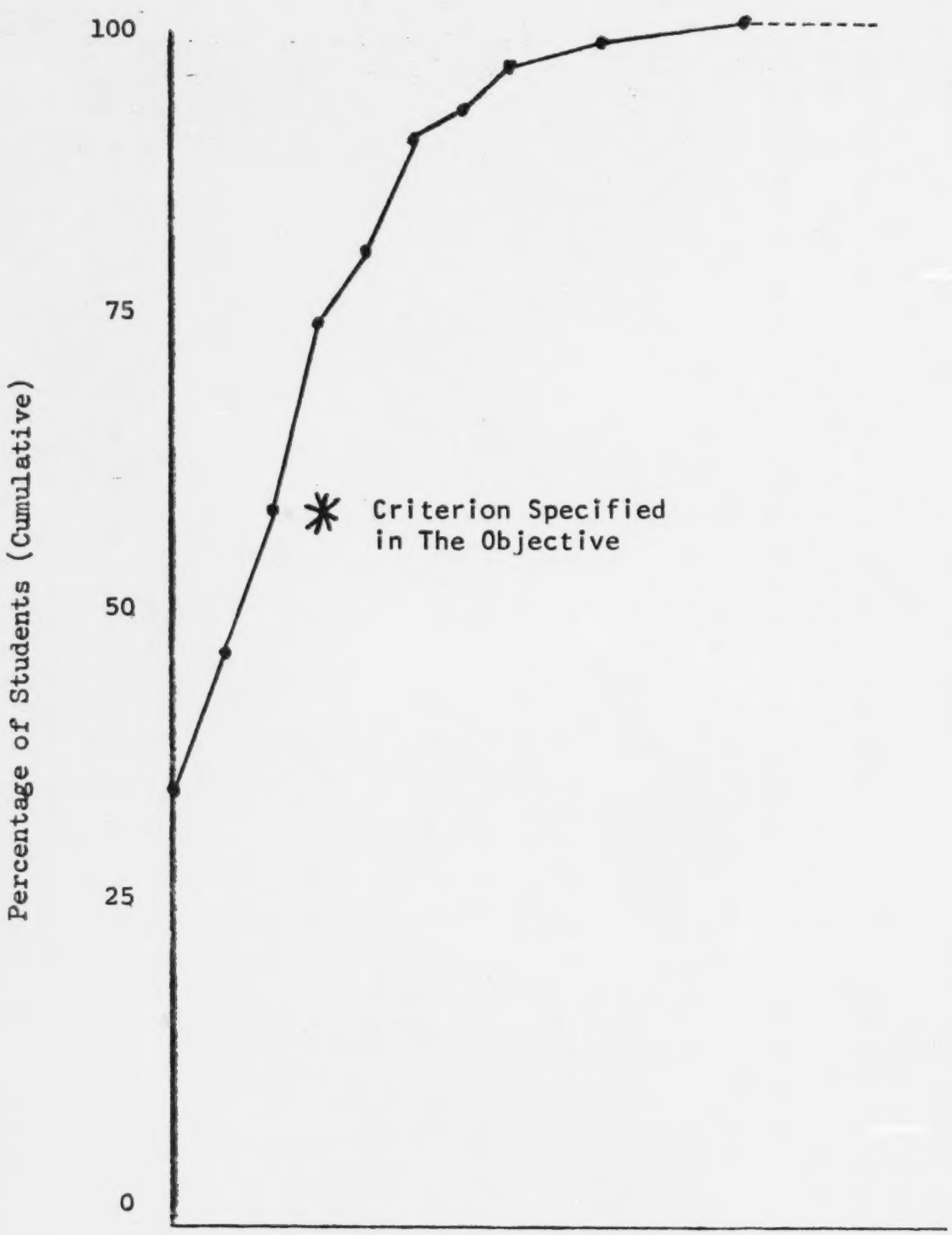

Percentage of Students (Cumulative)
100
75
50
25
0
Criterion Specified in The Objective
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Number of Errors
100 93 87 80 73 67 60 53 47 40 44 27 20 13 7 0
Percent Correct

FIGURE 7.5 Ogive of Student Performance on English Writing Test, Part II, Words

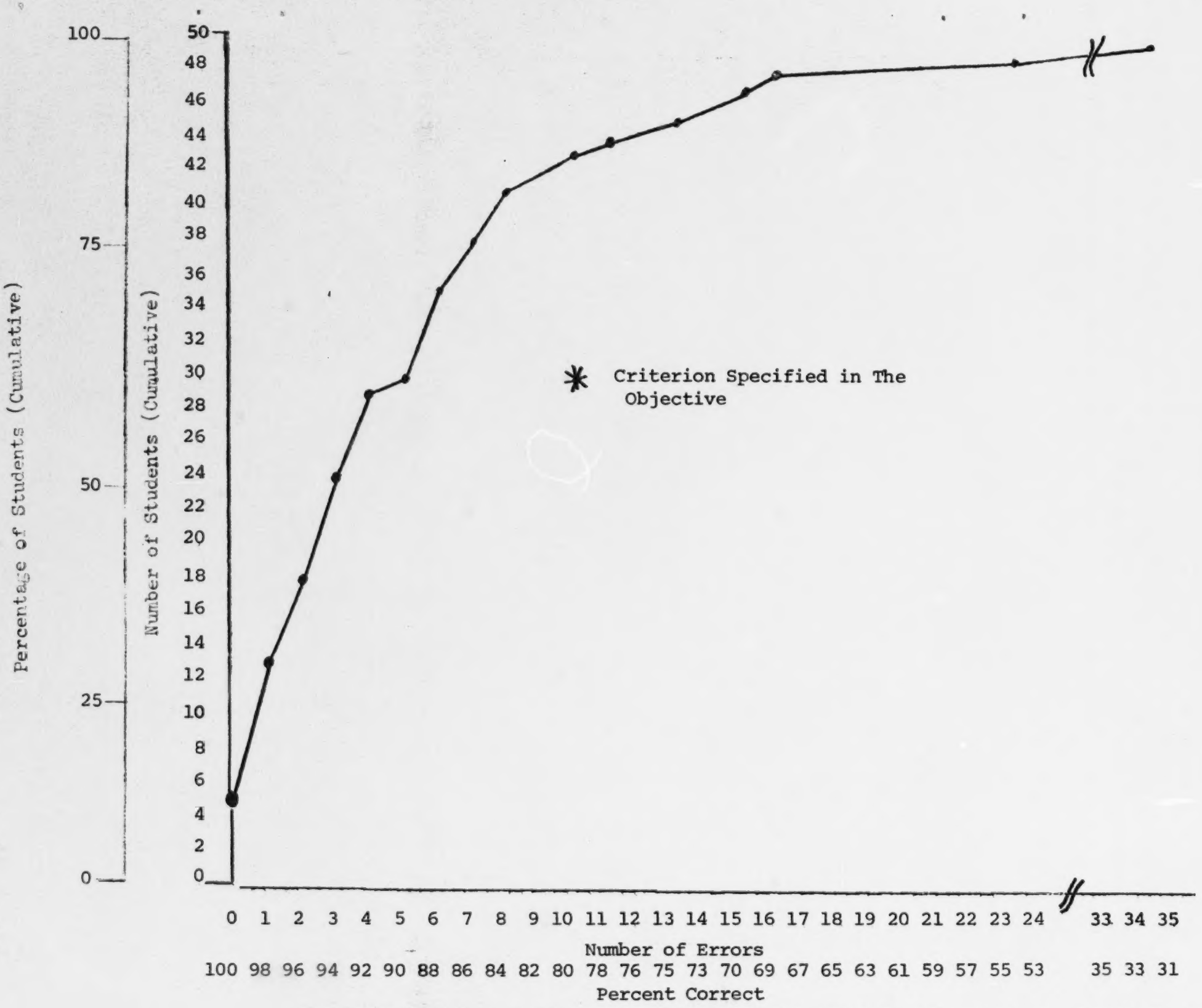


FIGURE 7.6 Ogive of Student Performance on English Writing Test, Part III, Sentences

Appendix 7.1

ENGLISH WRITING TEST

Name

i

t

m

p

s j

out
good
people

Name:

Three boys run.

They go down.

Houses are in the city.

Appendix 7.2

SPANISH WRITING TEST

(DOUBLE-SPACED VERSION)

Nombre	como
i	
t	
m	donde
p	
j	busca
s	

Nombre:

Mira la bola.

Voy a casa.

Soy feliz con papá.

Appendix 7.3

SPANISH WRITING TEST

(SINGLE SPACED VERSION)

Name:

i	S
t	cómo
m	donde
P	busca
j	

Mira la bola.

Voy a casa.

Soy feliz con papá.

Appendix 7.4

STANDARDS FOR EVALUATING ALL WRITING TESTS

Criteria for Writing Test

Three scores will be given on each test:

1. Copying Letters

   One point will be subtracted for the following errors:
   -1 for incorrect general shape, including dots and cross pieces where applicable
   -1 for incorrect number of loops
   -1 for incorrect size in relation to line or incorrect location on the line
   -1 for incorrect height

2. Copying Words

   One point will be subtracted for the following errors:
   -1 for poor relationship to line (-1 for each letter)
   -1 for missing or adding one or more letters (in Spanish, includes accent)
   -1 for backward letters
   -1 for incorrectly formed letters
   -1 for incorrect spacing within the word

3. Copying Sentences

   One point will be subtracted for the following errors :
   -1 for missing a capital or adding a capital
   -1 for missing a period at the end of the sentence
   -1 for missing a word or adding a word
   -1 if off the line (letters and words)
   -1 for missing or adding a letter within the word
   -1 for transposed letters
   -1 for missing accent marks
   -1 for words out of order

STUDY 8. PROCESS EVALUATION, ARRIBA CONTINUING EDUCATION IN SPANISH PROGRAM

Introduction

Rationale

The product objectives of the ARRIBA Continuing Education in Spanish program include constructive changes in students' grades, deportment, attendance, and punctuality. This process-evaluation study is concerned with the attainment of eight process objectives which were adopted as means to enable those constructive changes to occur.

Objectives

1. Teacher Selection. Teachers selected for this program will all be native speakers of Spanish, with 12 credits in teaching methods, and pass the screening of a committee consisting of representatives from the Spanish-speaking community, the Foreign Languages Department of the School District of Philadelphia, and Temple University College of Education.

2. Spanish Instruction. All courses will be carried out in the Spanish language (except for English as a second language (ESL)).

3. English Curriculum. All students will be enrolled in an English curriculum (ESL or regular English course appropriate to their grade level).

4. Puerto Rican History and Culture. A unit on this topic will be included in the social studies curriculum.

5. Parent Program. Parents will participate in one function at each school site which will be carried out in both the Spanish and English languages.

6. Staff Development - Preservice. All teachers will enroll in a special teacher-preparation program for bilingual teachers leading to a Bachelor's Degree or Master's Degree at Temple University and Emergency Pennsylvania Certification.

7. Inservice Training. All teachers with emergency certificates will participate in an inservice training program sponsored by the School District of Philadelphia and Temple University, and earn at least a C grade in the Seminar on Teaching.

8. Teacher and Pupil Questionnaire. Descriptive data about student population and teacher methodologies will be collected via a questionnaire. This data is to be used in planning for next year.

Procedures

Program Description

In the ARRIBA program four subjects were taught in the student's

mother tongue: Science, Math, Social Studies and Spanish as a first language. All students in the elementary and junior high school levels participated in E.S.L. (Funded by Title I and School District budgets). In the senior high school, students could participate in E.S.L. or regular English courses, and could pick from among the offerings of the bilingual program. At the elementary and junior high schools, students who participated in bilingual classes were required to take all four subjects.

Evaluation

Record keeping was not as orderly in this program as in the Potter-Thomas Model Bilingual School. Therefore, the project evaluator relied on interviews with the project director and the program supervisor in assembling this data. However, there were two exceptions. Objective 1 was fully documented by the director. Objective 8 employed questionnaires completed by students and teachers in February and early March 1970. The program supervisor delivered the questionnaires to the schools and returned them to the evaluator when they were completed.

Results

Objective 1: Teacher Selection. All 11 teachers in the ARRIBA program were selected from among those who completed the Summer Institute of 1969. In order to complete the institute program all had to meet the requirements for participation as teachers in the ARRIBA program. It should be noted in passing that one of the most important characteristics of these teachers was that they were English-Spanish bilinguals. While no specific ethnic background or language skill was specified for teachers in E.S.L. courses offered to students enrolled in ARRIBA, all but one of these teachers were bilingual.

Objective 2: Spanish Instruction. The program supervisor reports that Spanish was always the medium of instruction in the ARRIBA classes she observed. She noted, however, that at three sites (Ludlow Elementary School, Waring Elementary School and Penn Treaty Junior High School) the teachers systematically introduced the English technical vocabulary for social studies and mathematics courses, so that students would not encounter difficulty should they move to an English-language class at a later date. English vocabulary was introduced at the request of the principals in the participating schools.

Objective 3: English Curriculum. According to the program supervisor, all elementary, junior high and some high school students were enrolled in E.S.L. The remaining high school students took regular English courses. When the sample of students for product evaluation of this program was drawn, it was found that every student in the sample received a grade for some type of English instruction, thereby confirming the supervisor's report.

Objective 4: Inclusion of Puerto Rican History and Culture. According to the program supervisor every social studies or history course in the program began with at least a brief unit in Puerto Rican History and Culture. In addition, at the high schools the program offered an elective in History and Culture of Puerto Rico.

Objective 5: Parent Participation. The number of activities geared toward involving parents in the program varied from one school to another.

According to a bilingual program teacher at Ludlow, the parents of all students at the school were invited to special programs during Pan-American Week and Christmas. These programs included English and Spanish songs performed by the school choir. Children from the bilingual program participated in this choir. The Ludlow bilingual choir also entertained guests at the Nationalities Service Center in downtown Philadelphia and at a neighborhood playground. This teacher also reports that parents of children in the bilingual class prepared Spanish foods and a fashion show as part of the city-wide celebration of Puerto Rican Week. The school also hosted a Parent-Teacher meeting and meetings of the Ludlow Civic Association and Hispanos Unidos. She had no record of the number of parents of students in the program or community people who attended these functions. (See Addendum at end of this study.)

The program supervisor advises that at Stoddart-Fleisher three programs for parents were presented which included such bilingual elements as student entertainment and speakers. One was held as a Christmas celebration, one as a Mothers' Day celebration and one was held during March 1970. There is no record of the number of parents of program students or other adults who attended.

Penn Treaty Junior High School held a parents' meeting in which the contents and aims of the ARRIBA program were clarified. No record of the number of parents attending is available. In addition, one teacher at Penn Treaty formed a Puerto Rican Culture Club which meets monthly and contains ten student members. This group frequently has the parents of the participating students in attendance at its functions.

According to the project director the parents of children at Waring School participated in Christmas and Mothers' Day programs which contained both English- and Spanish-language elements. No record of the number of parents in attendance is available.

The project director also states that she addressed a meeting of parents at Kensington High School where the methods and aims of the bilingual programs were discussed. No one recorded the number of parents in attendance.

While no specific parent-oriented programs were presented at Edison High School, the program director reports that this school, as well as all others in the program, entered floats in the Puerto Rican Day parade. The community had the opportunity to see these floats. The Puerto Rican Day observance was proclaimed by the Mayor of Philadelphia.

In summary, five of the six schools held at least one activity designed to attract parents to the school in order to familiarize them with various aspects of the program. All schools participated in the Puerto Rican Day parade.

Objective 6: Staff Development - Preservice. Details on the outcomes of the summer program are found in Study 11. It should be noted here that all teachers in the ARRIBA program achieved the emergency certificates.

Objective 7: Inservice Training. The Program supervisor reported that all teachers in the program participated in the required seminars, earned at least the minimum grade of C, and continued to take courses successfully (See Study 11).

In addition to the seminars, the program supervisor reports that each teacher was monitored six times in the fall semester and six times in the spring semester while teaching the class. Monitoring was followed up with a supervisor-teacher discussion. At these discussions, the teacher commonly voiced the following problems: (1) Teachers were unhappy about moving from room to room without a permanent location. (There was no solution to this problem); (2) Teachers complained that there were inadequate texts. This was remedied by January when materials on order arrived; (3) Some teachers reported that their relations with Anglo teachers in regular classes were strained because of ethnic and language differences, and because they were unfamiliar with the procedures and traditions of the school. This was alleviated by having the principals appoint an experienced teacher to serve as a resource for the new bilingual teacher. In addition, teachers raised problems about school regulations and memorandums from the principal. These problems were resolved by the supervisor.

The program supervisor stated that in observing classes the three most common difficulties were: (1) Teachers needed help in developing lessons from course outlines and curriculum guides currently used in the schools; (2) They needed help in organizing lessons into coherent unity for presentation to the students; and (3) They needed help in disciplining students who were disruptive in the classroom. The supervisor says that these problems were handled in the post-observation discussions, and that at later observations they seemed resolved.

While notes on each observation were reported as kept, the supervisor was able to provide documentation on 19 out of 132 visits which took place. (See Addendum at end of this study.)

Objective 8: Teacher and Pupil Questionnaires.

Teacher Questionnaire. Of the 11 teachers, five junior high and two senior high school teachers returned the complete Teacher Questionnaire. One question asked them to indicate the number of students added to and dropped from their classes. This data points to relatively high turnover rate, with additions to classes outnumbering students who left them. One high school teacher, whose time is shared between both high schools in the program, reported that he began with a teaching load of 80 students in four courses. Between September and February, when the data was collected, he reported that 23 students were added to his classes while two students were dropped. A second high school teacher reported 72 students on her class rolls when she took over in November (from a teacher who had been transferred to another school). By the end of February, 21 had been added, and 14 had been removed. All four teachers at one junior high school reported that, as a group, they began with 41 students, gained 25 and lost

11. At the second junior high school, the reporting teacher stated that 36 children were added, and 26 removed from her class by February.

While these figures probably contain duplications in that some students may appear in more than one class and students added to classes subsequently left the program (i.e., the student was only in the class for a brief time), they do suggest that the constant turnover may have made teaching difficult.

A second question asked teachers to report the special techniques they developed for their classes. The results mainly contain items known to most teachers (demonstrations, oral reports, oral readings, silent reading exercises, writing compositions and letters, reading Spanish newspapers, grammar exercises). One interesting technique, tried successfully by a teacher of Puerto Rican History and Culture, was to play tape recordings made from radio and television broadcasts.

A third question asked teachers how the program could be improved. The following comments were made by one teacher:

- There should be a Spanish program coordinator in each school.
- Teachers should be selected with more attention to their specific language competencies.
- Anglos who speak Spanish could be included in some courses.
- More supervisory personnel are needed.
- More Spanish texts are needed.
- A Spanish bibliography would be helpful.
- Teaching materials could have a closer relationship to the students' life.
- The English course could be more challenging.
- There could be a Spanish literature course.

Student Questionnaire. The findings for selected items on the Student Questionnaire are shown in Table 8.1. Five of the schools completed and returned the Questionnaires, while the sixth, Waring Elementary School, failed to respond. According to the program supervisor, the questionnaires were filled out by all students in the program present at the school on the day they were handed out, except at Edison High School, where one teacher, who sees about half the total population of participants, administered the questionnaire. The results are consistent enough from school to school to warrant belief that they probably apply to the total population of participants.

According to respondents, the student body is predominately of Puerto Rican origin (83%), with 5% coming from other Spanish-speaking areas, and 12% stating that they were born on the mainland. Most of the

students born on the mainland were found in the high schools and one junior high school, with no mainland-born students in the second junior high or the elementary school.

An overwhelming number of participants indicated that they would prefer a mixture of English and Spanish courses in the coming year (77%), but this was not consistent across level of education. At the reporting elementary school, 88% preferred all courses in which the Spanish language would be the medium of instruction. As there were no questionnaires returned by the other elementary school, it is not known, at present, whether this is a property of one school or elementary students in general.

Only four percent of all students said they wished to be in an all-English program.

In all schools but one, more than half the students reported that Spanish was the language used at home most of the time, the exception being Edison, where 45% reported this was the case. For the respondents as a whole, 71% were from predominantly Spanish-speaking households, with only 1% reporting they came from households where English was the primary language. There seems to be a trend, however, across schools, with more of the high school students reporting using English in their homes.

Conclusion

In the main, this program seems to have been implemented according to plan, but with spot documentation and some variability from school to school. Objectives for teacher selection, preservice training and inservice training were carried out in an appropriate manner. Five of the six schools report adequate parent programs, but insufficient documentation prevents analysis of Performance Objective 6, which stated that at least 1/13 of the student population's parents would attend a function at each school.

The teacher questionnaires revealed one serious problem - student turnover - which would appear to interfere with an orderly presentation of curriculum materials and attainment of course-work objectives.

The student questionnaire confirmed that the population in the program is largely of Puerto Rican background. It also suggested that the vast majority of students prefer a mixed English-Spanish program. Some canvassing of students (and possibly parents), to assess if the participants would prefer more English-language activities than now available at each grade level, seems warranted.

TABLE 8.1

STUDENT RESPONSE TO SELECTED ITEMS FROM THE STUDENT QUESTIONNAIRE - (MARCH 1970)

	High School			Jr. H. S.		Elem.	Total
	Kensington	Edison	Penn	Tr. Stodd.-Fl.		Ludlow	
Number of respondents	38	29	44	36		26	173
Birth Place (%)							
Puerto Rico	61	76	98	86		92	83
Other Spanish	10	7	2	0		8	5
U.S. Mainland	29	17	0	14		0	12
Would you prefer to (%)							
Take all courses in Spanish?	0	10	0	19		88	19
Some Spanish/some English?	84	90	100	78		12	77
All English?	16	0	0	3		0	4
At home (%)							
Mostly Spanish is spoken.	50	45	95	62		100	71
Spanish & English are spoken.	47	55	5	38		0	28
English is spoken.	3	0	0	0		0	1

Addendum to Study 8

After the preparation of the foregoing report, the project director provided the following additional information:

Parent Participation - The project director attended most parent programs. At the Pan-American Day celebration every seat in the Laidlaw School Auditorium was filled, and people were standing. This indicates that there were at least 100 persons in attendance. The other parent events associated with the Arriba program were attended by between 15 and 40 persons.

In-Service Training - The claimed number of visits to classrooms is confirmed. The project director and the Arriba supervisor met weekly and discussed these visits.

STUDY 9. EVALUATION OF ARRIBA, PROGRAM OF CONTINUING EDUCATION IN SPANISH

Introduction

Rationale

The objectives developed for the Arriba program of continuing education in Spanish have a different character from those of the Model School program. In the latter, the fact that participants had had either no previous school expereince or, kindergarten only enabled the program planners to develop highly specific performance objectives. The Arriba project, on the other hand, was aimed at students who either (a) had begun their education in a Spanish-speaking environment before coming to the U.S. mainland, (b) had come from Spanish-speaking backgrounds and, therefore, had difficulty (e.g. poor grades, behavior problems) in regular classes, or (c) had manifested an interest in using Spanish language skills in the classroom in one or more subjects regardless of their skills in English. This initial target population was to come from a wide band of grade levels (4th grade through high school) at six school sites where there were substantial numbers of Spanish-speaking students (two elementary, two junior high, and two high schools). As the school year began, it was difficult to delineate specific academic attainment skills because of this great student heterogeneity. However, with completion of the first year of operation, it is now felt that with the availability of appropriate resources, product objectives for academic performance can be delineated in 1970-71.

Objectives

During the 1969-70 school year, the program focused primarily on the impact of having teachers who spoke the students' mother tongue, and on the curricular materials in their language. The inpact was believed to affect student performance and commitment to school. Specifically, objectives delineated were the following:

1. Participation in the Arriba program would result in fewer dropouts from the high schools.

2. Participation in the Arriba program would result in students improving their academic performances, i.e., they would attain higher grades.

3. Participation in the Arriba program would result in better classroom deportment as measured by a reduction in the number of disciplinary actions which were brought against participants. (See revision noted below).

4. Participation in the Arriba program would result in improved attendance.

5. Participation in the Arriba program would result in decreased lateness.

The initial proposal suggested two base lines against which the attainment of these goals could be observed: the previous year's (pre-Arriba) performances of (a) students in the program, and (b) students who were enrolled in regular classes in the participants' current grade.

During the subsequent year it was necessary to revise these objectives and base lines in two ways. First, it was found that disciplinary action records were poorly kept from year to year, so that a good base line was not obtainable. It was found, however, that the classroom deportment of every student had been rated during both the previous year and the current year. While the number of these ratings given each student varied from school to school, it appeared that an average of all those earned by the student in the past year and in the current school year could serve as substitutes for the disciplinary records as a measure of student deportment in the classroom. This variable would also have the advantage of providing a broad-based measure, as such a rating mean was available for virtually every student in the program, whereas disciplinary actions occur only when a student has acted out in school. As a result, the third objective was revised to read that there would be an improvement in the average of deportment ratings made by teachers of the students in program.

The second revision was made because it was found that the method of selecting students to participate in the program prevented forming an "equivalent population" from students who were in the same grade levels the previous year. This selection method varied somewhat from school to school.

At the elementary and junior high school levels, students entered the program after being recommended for it by a teacher or guidance counselor who felt the student would have difficulty functioning in English in a regular class. The majority of these students came from Spanish-speaking areas, mainly Puerto Rico, during the two years prior to the program's beginning.

At this level, if a student participated in part of the program, he participated in all aspects of it at his school.

Senior high school participants were recruited in a somewhat different manner. While a group of students entered the program via the counselor recommendation route, additional students requested admission to the program after having contact with others who were participating in it.

At this level, students with the advice of their guidance counselors, were free to select one or more courses in the program, so that many participated in it for part of their course work, while others participated in it for all major subjects.

Both these selection methods prevented forming a grade-equivalent base line, because it was not possible to reconstruct from records a population of students who"would" have participated in 1968-69 if the program had been available. As a result, only one base line, the previous year's performance of students currently in the program, was used in the evaluation. This base line effectively precluded all but informal evaluation of the first objective reduction in the dropout rate--because there is no way to construct a truly appropriate comparison group.

To this end, a probability of dropping out during the October-through-June time span was obtained by assessing the reduction of pupil enrollment from October through June for each grade level. This was used to compute a dropout probability for each grade level in each of the two high schools in the program. These probabilities were then multiplied by the number of students in each grade level in the sample studied. This procedure resulted in an estimate of 3.2 boys and 2.3 girls or 5.5 students would drop out of the high school program if students in it behaved like their grade-mates in the rest of the school.

Procedures

Program Description

The common element at all grade levels and sites of the Arriba program was that special course work in four subjects areas (Spanish as a first language, science, math, and social studies) was offered in the student's sites, English as a second language (ESL) was offered, although some of its teachers were not fluent in Spanish. ESL was not funded by Title VII. Beyond this communality, there was considerable heterogeneity among the six sites, necessitated by the fact that the Arriba project had to be fitted into the ongoing school program. At one elementary school site, a single classroom consisting of fourth-through-sixth graders was team-taught by two Spanish-speaking teachers (one exchange teacher from Puerto Rico). At the other elementary school and the junior high schools, students were grouped by age, and rostered into courses with the teachers in the program for part of the day. These children participated with Anglo children in the course work and activities of their regular classes during the remainder of the school day. At the high school level, where they had individual rosters, students might take one or more courses offered in the program.

Evaluation

Sample. A sample of about fifteen students from each of the six school sites was drawn at random from the most inclusive lists of all students who had participated in the program.

Data Source. The student's records for 1969-70 were examined and compared with those of the same students for 1968-69 if they were in the Philadelphia School System both years. For both years the grades in all "major" subjects, any behavior ratings that appeared, and the absenteeism and lateness data were extracted and recorded. "Major" subject area means course work in English, any other language, mathematics, science, social studies, or business for which major credit was given. In the elementary schools, language arts was sometimes divided into specific skill areas (e.g. reading writing). Where this was done, all were included as separate subjects in the average. At one school, two grades were sometimes awarded for subjects like mathematics if the student participated in both a program class and a regular class in that subject. When this occurred, both grades were included in the average computed. At the high school level, students frequently selected English language courses as well as, or in lieu of, some courses in the program. These were also included in the average, in that they represent courses where the student preferred the English course to the Spanish one.

The ratings of students' deportment were compiled from data kept in a variety of recording methods. In some schools, students received two ratings one in deportment and one in work habits. At other schools students received a subject-by-subject rating in deportment. In computing the scores of deportment, a mean of all available ratings was made for the student, and constituted the "behavior" score for each.

Absence and lateness ratings did not require any manipulation except that, where students were on the school roll for less than a full year, they were excluded from this analysis. It should be noted that all absenteeism and lateness data are for the full school year, even though specific programs did not generally begin until October, 1969. This full-year inclusion was necessary in order to make these data comparable to the 1968-69 base line.

Analysis. Non-parametric analyses (Mann-Whitney U and Wilcoxon signed ranks) were used where appropriate.

Results

As shown in Table 9.1 eighty-six students were in the sample. Follow-up showed that four (5 % of the sample) either were not in the program or had records which could not be located when the data were being recorded. Eight students (19%) sampled left school before the end of the school year. Seventy-four students (86% of the total sample) completed the school year: (38%) were new to the Philadelphia school system during the current year, and (36%) had attended Philadelphia schools at least one year prior to enering the program.

Objective 1 - Dropouts.....Among the students in the high school samples whose year-end outcome is known, three boys at Edison High School (25%) and three girls at Kensington High School (23%) dropped out of school. These six students are close to the 5.5 estimate derived earlier, suggesting that students in the program are similar to the rest of the school in this regard.

TABLE 9.1 DESCRIPTION OF THE ARRIBA STUDENT SAMPLE

Schools	Attended Last Year	New Student	Withdrew from School	Unknown or Not in Program	Total
High Schools					
Edison (Boys only)	3	6	3	2	14
Kensington (Girls only)	6	4	3	2	15
Junior High Schools					
Penn Treaty	7	5	-	-	12
Stoddart-Fleisher	5	9	-	-	14
Elementary Schools					
Ludlow	8	5	2	-	15
Waring	7	9	-	-	16
Total	36	38	8	4	86
Percentage	42	44	9	5	100

Objective 2 - Grades.....Participation in the Bilingual Program clearly enhanced the grades earned by students. On a six-point scale--A=5, B=4, C=3, E=1 (Failure with permission to repeat), F=0 (Failure without permission to repeat)--the average of major subjects for students who were in Philadelphia schools both years rose from 2.29 to 2.99, with only four students having lower averages in 1970 than in 1969. When the significance of this gain was tested using the Wilcox on matched-pairs signed ranks test the results were highly significant ($Z=4.3$, $p < .00003$ one tail).

The mean of grades earned by students who participated in the Arriba program during their first year in the Philadelphia school system was slightly higher than that earned by students who had been in the schools the year before. These students averaged 3.15. A Mann-Whitney U was computed in which the difference between grades earned in the program by new students and by those previously in the schools was found not to be significant ($Zu= 0.99$, $p < .16$), suggesting that the underlying grade distribution for both groups of students was the same.

Objective 3 - Behavior.....Participation in the bilingual program clearly enhanced the teachers' perceptions of the students' deportment. In most schools, students received behavior grades of A,B,C,D, or E which were assigned values of from 5 through 1. Other schools used a numerical system of 1,2,3. According to school personnel, these were roughly equivalent to A, B, and C or below. Since behavior ratings of D and E were rare, it was felt that 1, 2 and 3 were probably equivalent to A, B and C in most cases, and were assigned these values.

Using the rough measure of the average of whatever deportment scores were given in each school, the mean behavior score was computed for the twenty-nine students who had been in the Philadelphia schools during the year prior to entering the program and who had received such ratings. The mean of the average behavior ratings for this group was 3.46 the year prior to their entering the program, and 3.76 during the current year. Using the Wilcox on matched-pairs signed-ranks tests, a Z of 2.48 was obtained, $p < .006$ (one tail). Thirty-four of the thirty-eight new students also received behavior ratings during the current school year. The mean of these was 3.80, which was not significantly different from the current year's ratings of the students who had previously been in Philadelphia schools (Z=0, Mann Whitney U).

Objective 4 - Absenteeism.....The data for absenteeism are not clear in indicating the success of the program. There were thirty-two students whose records indicated that they had attended Philadelphia schools for the complete years in 1968-69 and 1969-70. The mean number of absences for these students in the year before the program was 19.8 days. During the first year of the program this rose to 32.4. In contrast to this group, thirty-two students admitted to the schools for the first time in 1969-70, and on roll for the whole school year were absent an average of 21.7 times. These results indicate that absenteeism in the program was markedly different for new students and for students experienced with Philadelphia schools. A Mann-Whitney U test indicated that this difference was highly significant (Z=2.39), $p < .008$, (one tail test).

Objective 5 - Lateness.....The objective that there would be a decrease in the frequency of lateness was not attained. Lateness data were recorded for twenty-four students who attended Philadelphia schools both in 1968-69 and in 1969-70. These students were late an average of 1.62 times during the year before entering the program and an average of 2.5 times during the year in which they participated in the program. Lateness data were also available for thirty-one students in the sample of those new to Philadelphia. These tended to be late more frequently than the students who had been enrolled in the schools before, with a mean of 4.4 latenesses.

Conclusions

Within the limitations of this study, the findings indicate that the program has been a success insofar as teacher perceptions of students are concerned. The teachers who rated students on their academic achievement and behavior clearly saw the students as better in the context of the program than had the teachers making similar ratings the previous year. The lack of important differences in grades and behavior between new students and students who were in the schools the previous year suggests that the program was equallly effective for both groups of students in these respects.

At present, there are no hard facts which can be used to explain the increase in absenteeism among students with previous Philadelphis school expeience although there is a city-wide trend for absenteeism to increase with grade. In 1968-69, absence in high school was 2.13 times that of elementary students. (Superintendent's Annual Report, 1969).

In addition, according to the Division of Pupil Personnel, there was a trend for absenteeism to increase in most schools in the program from the 1969 to the 1970 school year: Kensington High School increased 16%, Edison High School increased 6%, Stoddart-Fleisher 23%, and Penn Treaty 4%. One school, Ludlow, remained the same, and one school, Waring decreased by 21%.

As there is no simple way to integrate the information provided by these trends, it is not possible to indicate how much of the absenteeism increase found is due to nonprogram factors. However, it seems likely that at least a part of it is due to them. With these as given, the more surprising fact is that the absenteeism among participants who were new admissions to the Philadelphia schools was so much lower than among other students. Exploration of the reasons for this last finding seems warranted.

The lateness data trends, indicating that students in the program tended to be absent more in 1969-70 than previously, and that students new to the Philadelphia schools were absent more than the others, lack explanation at this time. However, the low rate of lateness (all groups averaging under five per year) suggests that rampant lateness is rare in the target population of the program.

In conclusion, the Arriba program resulted in improved grades and teacher ratings of student deportment. The effect of the program on absenteeism and dropout incidence cannot be clearly determined at this time. Lateness seemed to increase with implementation of the program, but the base rate is too low to be of educational importance both when students were in the program and before they were enrolled in it.

STUDY 10. PRINCIPALS' EVALUATION OF THE ARRIBA PROGRAM AND THE MODEL SCHOOL PROGRAM

Introduction

Rationale

As part of the process evaluation procedure, the proposal for Project Arriba and the Model School specified that principals would be asked (a) to evaluate the program as it operated in their schools, (b) to provide feedback about the future of the program as they see it, and (c) to evaluate the skills of the teachers who were assigned to their schools. This evaluation was to provide guidance to the planners of the summer institute as well as a broad-based conception of the program's functioning.

Procedures

Evaluation

Instrument. Data for this study were collected on the questionnaire shown in the appendix to this paper. The instrument was developed by the project director, the supervisors of the programs, and the project evaluator in order to provide information which was necessary for planning in year two. The questionnaire contained two parts.

In the first part, the principal was asked to focus on the Title VII program as a whole. First the principal was asked to make a rating. Then he was asked to qualify or explain his rating if he wished. This format was chosen because it seemed capable of providing easy tabulation of responses, without sacrificing richness. In the second half, where the principals rated the performance of their teachers, it was felt that the items were specific enough so that additional comments were not necessary.

Methods. A copy of the Principal Questionnaire was delivered by the program supervisor to the principal of each of the seven schools. The forms provided included the names of all the teachers working in the Title VII project in each school (whether paid out of Title VII or School District budget). The principals were also provided with a return envelope, in which the questionnaire could be returned to the project evaluator without passing through the hands of any persons who were objects of the ratings. The questionnaires were distributed during the last week of April, 1970. All had been returned by May 15, 1970. One questionnaire from Kensington High School was filled out by an acting principal because the principal was on leave.

Subjects. As all the principals of schools responded, and all the teachers working in the program were rated, all data presented are parameters of the populations of principals' evaluation of the program and principals' evaluations of the teachers in the program working in their school.

Results

Question 1 asked the principals how satisfied they were with the bilingual program operating in their schools. Five (71%) reported that they were highly satisfied. Two (29%) reported that they were somewhat satisfied. None reported that they were "somewhat" or "very" dissatisfied.

The comments of those less than totally satisfied pointed to problems which were peripheral to the nature of the program itself. One reported that there were still many students in the school who needed the program but were excluded from it because of limited resources. The second pointed to the need for more instructional materials for the teachers to use.

Question 2 asked principals whether they wished to have an expanded program, the same size program, or a reduced program in their schools next year. They also could indicate that they wished to have the program eliminated from their schools. Six of the respondents (86%) asked for expansion of the program. Only one (14%) asked that it remain the same. None of the principals wished to have the program reduced or eliminated from his school. All of the respondents who both asked for expansion and wrote a comment pointed out the need to service more pupils and/or to provide more varied course offerings. The one principal who asked that the program be kept the same gave lack of space for expansion as his reason for wishing to keep the program the same size.

Question 3 asked the principals who wished to have the program expanded whether more teachers with the training provided by the Summer 1969 training institute would be helpful. All the principals (100%) who had asked for expansion indicated that teachers with this training would be desirable. In the comments, one teacher who was not a part of the institute was singled as the preferred type although the specific reason for the preference was not stated. A second comment indicated dissatisfaction with teachers who had been hired by the School District in Puerto Rico to teach here because only one of five remained the entire year. Presumably, this was a contrast with teachers in the project, all of whom resided in the Philadelphia metropolitan area before being selected for special training. Among this latter group, only one teacher of the 29 who were involved in the program failed to complete the full year. His leaving was necessitated by a family emergency. A third comment noted the teachers in the program "relate well to students."

Question 4 asked the principals to rate the special supervision received by the teachers. At the Potter-Thomas Model School, two supervisors worked solely with the faculty of this school. At the other schools two supervisors worked with teachers on an itinerant basis, one supervising English as a second language, the second supervising Spanish as a first language, science, math, and social studies. This question resulted in more of a spread than any other general question. Three principals (43%) rated the supervision as excellent, two (29%) rated it as good, and two (29%) rated it as fair. None thought it was poor. In the comments made, one high school principal stated that the teachers claimed they received "little support, guidance, or supervision during the school year." One elementary school principal (not the Model School) commented that a teacher expressed a need for more supervision of English as a second language, but rated the overall supervision as good. A third principal (of a high school) indicated that services of a curriculum specialist could be helpful, but rated the supervision as excellent. A fourth principal (of junior high school) commended the supervisor of the four curricular areas for being supportive and relating well to teachers, and for being helpful in working with the students.

Question 5 asked principals whether the training program for teachers could be improved. All but one stated that it could; however, there was little agreement about the deficiencies in the current training. Classroom management, record keeping, student disciplining, use of a language laboratory, curriculum materials, more information about teaching techniques on the secondary level, and

a need to reduce clannishness among the Spanish-speaking teachers were each cited by at least one principal.

Question 6 asked the principal to indicate other factors which should be brought to the director's attention. Only two principals indicated anything suggesting problems of the program management or contents. One elementary school principal reported that parents had commented to him that they wished there were more emphasis on English in the contents: "many parents...favor instruction primarily in English with a bilingual teacher who can use Spanish for supplementary or clarification purposes." A second principal (high school) reviewed comments made earlier and also asked for more involvement of non-Spanish-speaking pupils in the program. He also commented that the teachers have "done a remarkable job of getting the program underway."

The second part of the questionnaire asked principals to rate each of the teachers on six items. The results of these ratings are shown in Table 10.1. They are overwhelmingly favorable. If excellent and good are both regarded as indicating approval of the teachers' performance and fair and poor as indicating disapproval, then overall approval was given to teacher performance 92% of the time in the six areas examined. In only one area did any principals see problems with their teachers--the area of relationship between program teachers and the rest of the faculty. However, even here, only 17% are cited as having difficulty.

Conclusions

Taken as a whole, the principals have clearly provided a vote of approval for both the program and the teachers who man it. There are only two areas where it appears that additional effort or rethinking of the current procedures could be of value: teacher supervision and integration of program teachers into the faculty.

It seems advisable, at present, to undertake two types of action before the beginning of the coming school year. The first is to review the role of the supervisors with those principals who see the situation as less than ideal, clarify the supervisor's role, and adjust it to meet the specific need of the staff at these schools where necessary. The second type of action which seems warranted is to develop one or more activities in which both regular school staffs and project staffs can begin to work together toward bridging the gap between them.

TABLE 10.1

PRINCIPALS' RATINGS OF TEACHERS IN TITLE VII PROGRAMS

		Rating			
		Excellent	Good	Fair	Poor
Rapport with Students	N	19	7	3	0
	%	66%	24%	10%	0%
Relation with Administrative Personnel	N	19	9	1	0
	%	66%	31%	3%	0%
Knowledge of Subject	N	17	12	0	0
	%	59%	41	0%	0%
Relations with Fellow Teachers	N	15	9	3	2
	%	51%	31%	10%	7%
Preparation and Organization of Teaching Materials and Lessons	N	15	12	2	0
	%	51%	41%	7%	0%
Class Controls	N	18	8	3	0
	%	62%	28%	10%	0%
Total Ratings at each Level	N	103	57	12	2
	%	59%	32%	7%	1%

Appendix 10: EVALUATION FORM

TO BE COMPLETED BY PRINCIPALS OF SCHOOLS WITH TITLE VII BILINGUAL PROGRAMS

In answering the following questions, please focus on the Title VII Bilingual Education program in your school. The teachers whose classes are a part of the programs in your school are:

_____

_____

_____

Evaluation of the Program

1- How satisfied are you with the bilingual program operating in your school?

_____Very satisfied
_____Somewhat satisfied
_____Somewhat dissatisfied
_____Very dissatisfied

If you wish, comment on your response_____

_____

_____

2- If funds for this program are available for next year, which do you feel is appropriate for your school?

_____Expand the program to reach more students
_____Remain the same size as it is this year
_____Be reduced in size
_____Be eliminated from your school

If you wish, comment on your answer_____

_____

_____

3- If, on Question 2 you said that you would like the program to expand, do you think that more Spanish speaking teachers with background and training similar to that of teachers from the special 1969 summer institute would be helpful?

_____Yes

_____No

3- If you wish, comment on your answer_____

_____

_____

4- How would you rate the special supervision received by the teachers at your school?

_____Excellent
_____Good
_____Fair
_____Poor

If you wish, comment on your answer_____

_____

_____

5- If a summer institute like that held last year is repeated, can you suggest any areas that should be emphasized more this year than last.

____No

____Yes Please list the areas_____

_____

_____

6- Please note any other factors about the bilingual program in your school which should be brought to the project director's attention at this time.

_____

_____

EVALUATION OF TEACHERS

Please give your impression of each teacher on the following scales. Rate them according to the following scale:
E= Excellent, G= Good, F= Fair, P= Poor

TEACHERS' NAMES

a. Rapport with students in his/her class.

b. His/Her relationship with administrative personnel

c. His/Her knowledge of the subjects taught

d. His/Her ability to relate to fellow teachers

e. His/Her preparation and organization of teaching materials and lessons

f. His/Her class control

Prepared by R. Offenberg
Office of Research and Evaluation

STUDY 11. SUMMER INSTITUTE FOR TRAINING TEACHERS, 1969

Introduction

Rationale

During the summer of 1969 the School District of Philadelphia and Temple University cooperatively conducted a Bilingual Training Institute for Teachers of Spanish Origin. Twenty-one trainees participated in an intensive eight-week program that was approved by the Commonwealth of Pennsylvania Department of Public Instruction. The Institute was funded by EPDA and Title VII. Emergency certification on a temporary basis was granted to the 21 participants who successfully completed the program, making them eligible for employment as first-year teachers in the Philadelphia School District. They were subsequently employed in the Bilingual program and other programs which required native Spanish speakers.

The institute participants who successfully completed their academic work during July and August 1969 received emergency certification from the Pennsylvania Department of Public Instruction and were employed as regular first year teachers in the Philadelphia School District as of September 1969. They have continued their educational preparation at Temple University leading toward permanent teacher certification.

Objective

The Summer Institute's objective was to have 21 native Spanish-speakers receive emergency certificates to teach in schools with a large population of Spanish-speaking pupils using Spanish as the medium of instruction. Furthermore, it was expected that those who benefited from the Institute training should continue their studies to the B.A. or M.A. degree in Education at Temple University.

Procedures

Program Description

The trainees who were admitted into the Summer Institute were selected on the basis of any one of the following credentials:

- The candidate had formerly served as a teacher in Puerto Rico or some other Spanish-speaking country, but did not meet Pennsylvania certification requirements.
- The candidate had completed at least two years of studies beyond the High School level in any field or major.
- The candidate had acquired experience through work in Community organizations.

The committee responsible for selecting the trainees was composed of one Temple University official, two members of the Philadelphia School District Foreign Language Office and one representative from the community.

The training institute consisted of a summer of intensive university course work and field experience with Spanish-speaking children. The participants taught in special summer centers for Spanish-speaking children in the mornings and took university course work in the afternoons for a period of eight weeks from 9:00 a.m. to 5:00 p.m., from June to August, 1969.

The summer program contained the following courses for a total of 12 semester hours:

. Methods of Teaching Arithmetic	3 S.H.
. Methods of Teaching Second Language	3 S.H.
. Observation and Practice Teaching	3 S.H.
. Analysis of Community Problems	3 S.H.

The arithmetic course was taught in English. The remaining courses were taught in English and Spanish. In addition, the participants were exposed to intensive training sessions in spoken English and seminars on the structure of the Spanish language. Teachers received a stipend during this training.

Staff from Temple University taught the courses. Consultants from other universities and from the Spanish-speaking community were invited to work with the participants.

During the academic year 1969-70, the participants were supervised on the job as they continued their studies at Temple University. Each participant carried six semester hours in the fall semester and six semester hours in the spring. Course work was tailored to meet the individual needs of participants. One full-time supervisor and two part-time supervisors worked with the participants in their schools and conducted seminars related to problems in teaching in cooperation with the Director of Temple University's Certification Program and the Director of Elementary Education.

The results of the program were reported to the evaluator by the Project Director who has access to Temple University records. These records were supplemented by a questionnaire prepared by the Temple University faculty in which the participants were allowed to discuss the strengths and weaknesses of the program. This questionnaire was completed by all participants at the end of the program.

Results

Attainment of Objectives

All of the 21 teachers enrolled in the institute successfully completed the course work, and received their emergency certification. Twenty completed one year of teaching. One member returned to Chile due to his father's illness. In addition to their classroom responsibilities,

all twenty of the teachers continued their studies in Evening School at Temple University. In the fall all the teachers took Practice Teaching and Methods of Teaching English as a Second Language. The teachers completed 12 hours of credit during the year and plan to continue their studies toward regular certification. No one failed a course; in fact, one student received the only A grade in a course containing Anglos and Latinos and conducted in English. All 20 teachers have continued with the program in the second year.

A special ceremony was conducted at the end of the Institute in which the Puerto Rican community officially congratulated the graduates of the Institute. This testimonial was sponsored by 27 community organizations. Each student received a certificate of honor from the community and his teaching certificate from the Board of Education.

In order to continue the lines of communication developed at the Institute, the teachers formed an Association of Bilingual Teachers. Under the direction of its officers, the Association meets to discuss the difficulties with which their unique capacity presents them. Occasionally they sponsor cultural functions which are of benefit to the entire Latino community. On Thursday September 24, 1970 Bilingual Teacher Institute of Philadelphia will present a program honoring the music of Puerto Rico's foremost composer, Rafael Hernandez, at the Potter-Thomas School.

A reader is directed to more information on the Bilingual teachers and the Institute in the Principals' Evaluation Report, Study 10.

Questionnaire

At the end of the Summer Institute the participants were asked to fill out a questionnaire covering various aspects of the program. All 21 participants filled out the form in extensive detail.

Question 1 asked the participants to indicate the most valuable learning experience they had in the Institute. Fifteen (71%) reported the "techniques for teaching English and Math." Closely related to this answer were the remarks of the five members (24%) who mentioned practice teaching and the three (14%) who listed classroom observation and discussion. In addition, four (19%) students claim they were motivated by the enthusiasm of their professors. Five students (24%) focused on their own enrichment at the Institute by mentioning their improved English and Math ability. Six (29%) students found the discussion of community problems valuable. As a result of the Institute nine (43%) students expressed confidence in their recently acquired teaching ability. None of the students neglected to answer this question and, as noted from the percentages, several listed more than one answer.

Question 2 asked the participants to indicate the least valuable learning experience they had in the Institute. Eight students chose to answer this question by affirming the importance of everything in this program. Five more students left the space blank even though they answered the previous question, suggesting that 62% of the participants did not feel they had a low-value experience. Four students (19%) complained that the classroom observation sessions were a waste of time because the teachers

they observed were inadequately prepared for the day's lesson. One student (5%) suggested the possibility of observing teachers in the fall or spring, rather than the poorly prepared summer school teachers. Another student (5%) recalled a large amount of repetition among the instructors during the first days of class. It was suggested that several orientation sessions could cover the material common to all of the instructors.

Question 3 asked the participants what they enjoyed most about the Institute. Thirteen (62%) spoke of the tremendous rapport with their professors and the project director. Each of the professors was mentioned by name and praised at least once. Four (19) students were thankful for the new friendships they had formed. Three mentioned the math course (14%), two (10%) were impressed with their professors' extensive knowledge of Puerto Rican culture, and four (19%) said they liked the challenge of the classes.

Question 4 asked the participants what things they liked least about the Institute. Seven students (33%) made reference to a bitter classroom confrontation caused by a "community leader" who entered a classroom uninvited and denounced the instructor. Four of the seven students regarded this episode as the origin of divisions, cliques and gossip among the Institute participants. Eight more individuals (38%) noted they were unhappy with the lack of unity. One student (5%) thought the instructors incompetent. One student (5%) said that the English class was boring and repetitious. The remainder made no comments. Thus, it seems that only two (10%) of the 21 participants disliked aspects of the program which were directly under the control of staff.

Question 5 asked the participants how they would have changed the Institute. Twelve (57%) students made reference in various forms to the length of the Institute and its concentrated content. On the one hand five students wanted more time for additional student teaching and classroom observation, while another suggested less work should be required. There was not enough time to complete the reading assignments and projects, and prepare for examinations. The long school day left little time for homework. Relief from the tight schedule was such an important issue that allusions to the lack of time also appeared in questions 2, 3, and 4. In question 4, five students mentioned lack of time as the thing they liked least about the Institute. Six students would have been more satisfied had the duration of the Institute been extended to accommodate the work load. Two students specifically suggested extending the program to three months.

Question 6 asked the participants for their general impression of the Institute. All (100%) of the students gave an enthusiastic response. Their remarks included "very good, big step forward," "great challenge," "exciting experience," wonderful opportunity," "magnificent." Two students said that it was one of the best opportunities of their lives. Two more said the Institute should be repeated.

Conclusions

All evidence points to the fact that the Summer Institute was an outstandingly successful program, both from the point of view of the

participants and from that of the School District. That all participants completed the program and earned their certificates, and that 95% of the participants completed one year of teaching, are performing satisfactorily, are returning for their second year of teaching and are progressing satisfactorily in their own education, point to the quality of the candidate selection and the educational program.

Criticisms by students focused primarily on contingency factors, with only one point clearly needing review before a program such as this is repeated: the relationship between the quantity of content and the time allotted for it.